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THIRTY-NINTH ANNUAL REPORT  
OF THE  
GRAFTON STATE HOSPITAL  
AT  
NORTH GRAFTON AND WORCESTER,  
FOR THE  
YEAR ENDING NOVEMBER 30, 1916.



BOSTON:  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
32 DERNE STREET.  
1917.



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PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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## OFFICERS OF THE HOSPITAL.

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### BOARD OF TRUSTEES.

LEANDER F. HERRICK, <i>Chairman</i> ,	. . . . .	WORCESTER.
ROGER W. CUTLER,	. . . . .	DOVER.
PETER O. SHEA, M.D.,	. . . . .	WORCESTER.
HENRY J. PERREAULT,	. . . . .	WORCESTER.
MARGARET A. CASHMAN, <i>Secretary</i> ,	. . . . .	NEWBURYPORT.
JOHN P. BOWDITCH,	. . . . .	FRAMINGHAM.
CHARLOTTE R. F. LADD,	. . . . .	STURBRIDGE.

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### RESIDENT OFFICERS.

JAMES V. MAY, M.D.,	. . . . .	<i>Superintendent.</i>
HIRAM L. HORSMAN, M.D.,	. . . . .	<i>First Assistant Physician.</i>
ARTHUR E. PATTRELL, M.D.,	. . . . .	<i>Senior Assistant Physician.</i>
WILLIAM A. MACINTYRE, M.D.,	. . . . .	<i>Assistant Physician.</i>
GEORGE K. BUTTERFIELD, M.D.,	. . . . .	<i>Assistant Physician.</i>
MARY JOHNSON, M.D.,	. . . . .	<i>Woman Physician.</i>
ADA F. HARRIS, M.D.,	. . . . .	<i>Woman Physician.</i>
JOHN McRAE,	. . . . .	<i>Steward.</i>

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### CONSULTING SURGEON.

LEMUEL F. WOODWARD, M.D.,	. . . . .	WORCESTER.
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### DENTISTS.

ADELARD J. HARPIN, D.M.D.,	. . . . .	WORCESTER DEPARTMENT.
ERNEST P. BRIGHAM, D.M.D.,	. . . . .	GRAFTON DEPARTMENT.



# The Commonwealth of Massachusetts.

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## TRUSTEES' REPORT.

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*To His Excellency the Governor and the Honorable Council.*

The trustees of the Grafton State Hospital respectfully submit herewith their report of the affairs of the hospital for the year ending Nov. 30, 1916.

The vacancy created in the Board of Trustees by the expiration of the term of Miss Mary O. Henry was filled by the appointment of Mrs. Charlotte R. F. Ladd of Sturbridge in February.

The vacancy created by the resignation of Dr. H. Louis Stick, superintendent of the hospital, was filled by the appointment on March 22, 1916, of Dr. James V. May of Albany, chairman and medical member of the New York State Hospital Commission. Dr. May was connected with the New York State hospital service for fourteen years and had five years' experience in the management of the hospitals of that State.

Section 2 of chapter 679 of the Acts of 1912, as amended by chapter 456 of the Acts of 1914, and by chapter 170 of the General Acts of 1915, authorizing the Board of Trustees to dispose of the property of the Grafton State Hospital on Summer Street, Worcester, and requiring the removal of the patients from that building was repealed by chapter 283 of the General Acts of 1916.

In accordance with the policy of developing the institution at Grafton, as provided for by various legislative enactments, the Board has removed the administrative offices of the institution from the buildings on Summer Street to the Grafton Department of the hospital, and the offices of the superintendent, treasurer, steward, etc., are now located in the new administration building at that place.

The storerooms have also been removed from Summer Street to Grafton, and the hospital supplies are now being issued from the store building at Grafton, which has been unoccupied heretofore. The Board has felt that it was unwise to issue the supplies of the institution from the Worcester Department, which accommodated less than 600 patients, while there are now nearly 1,200 at Grafton.

The laundry work of the Grafton Department is now being done in the laundry building at that place instead of being brought to Worcester, as has been done for many years.

Of the ten buildings which were unoccupied on May 1, 1916, seven are now in use including the following: the administration building, the officers' cottage, the Willows nurses' home, the carpenter shop, the storehouse, the Elms C building, and the Oaks D building. Some of these buildings have been completed and unused for several years. The remaining three, which are the Oaks service, the Elms service and the Elms B buildings, will be occupied within the next few months.

In January the Board had a census taken of all tubercular patients and were informed that there were 21 incipient and 31 semi-active cases in the institution. The superintendent was instructed to place all tubercular patients in buildings in Grafton where they would be isolated and where they could receive the care and diet that tubercular patients should receive. Such arrangements were made for their special treatment, the men being transferred to Elms C and the women to Pines A.

Arrangements have been made to care for all of the epileptics as well as the noisy, disturbed and violent class of patients at Grafton instead of in the Summer Street buildings. It is the policy of the Board to keep only such patients in the Summer Street buildings as will prove to be unobjectionable in a city community.

Many improvements have been made at both the Worcester and Grafton departments of the hospital, as is shown in detail by the appended report of the superintendent. The average daily population of the hospital during the fiscal year ending Nov. 30, 1915, was 1,502. With the changes which have been made during the summer it will be possible to take care of a population which will reach 2,000 during the coming year, pro-

vided sufficient appropriations are made by the Legislature for the maintenance of the institution.

We would respectfully call your attention to a number of matters which should receive immediate consideration. If the buildings at Summer Street, which are worth approximately \$400,000, are to be used for the care of the insane, as would be indicated by the legislative enactments of last year, some changes must be made at that place. The investigations made by the Commission on Mental Diseases and their engineers show conclusively the urgent need of remodeling the heating plant which has been in use since 1856 and is now inadequate and obsolete. We find that this building has not been properly heated for years. The amount of money required for this purpose, as estimated by the Commission, is \$63,000.

We would also call your attention to the urgent necessity of providing additional fire protection for both the Worcester and Grafton departments of the hospital. The need of this protection cannot be too strongly emphasized. At Summer Street the only method of egress for the patients located on the third floor of the building is through narrow wooden stairways which should be replaced at the earliest possible moment by fireproof structures. At the first meeting of the Board this matter was considered and a request was made that an examination be made by the District Police to show what changes, in their opinion, were necessary to improve conditions and to comply with the law. On receipt of their report many minor improvements were made, but funds were not available to replace the wooden stairways with fireproof structures. We feel that this matter should be given early consideration. The estimated cost of the necessary changes is \$12,125.

The trustees are of the opinion that additional fire protection is urgently needed at the Grafton Department. The Commonwealth has constructed at this place nearly one million dollars' worth of buildings which are located in an area covering 907 acres in all. The Oaks group, with seven buildings, is over 1 mile from the administration building and the hose room where the fire apparatus is kept. There is only a 4-inch pipe line which supplies the Oaks group with water for fire protection and all other purposes. There is nearly 2 miles between some



of the buildings in the Oaks group and the building occupied by patients in the Willows group. Under these circumstances we feel that the purchase of a motor-driven combination chemical and hose wagon for the purpose of fire protection is amply justified and, furthermore, a very urgent need. The fire protection of the institution at the present time is highly inadequate considering the amount of money invested. The estimated cost of a combination chemical and hose wagon is \$2,500.

Refrigerators should be installed in the storehouse at Grafton as soon as possible. As practically 75 per cent. of the hospital population is at that place, the expensive cartage of butter, eggs, meat, etc., from Summer Street should be discontinued and these supplies kept at Grafton. To purchase and install the necessary machinery for this purpose, the estimated cost would be \$9,000.

A fireproof record room is required by the Commissioner of Public Records and to comply with the laws of the State. To render fireproof the room in which the records of the Worcester Department are now kept in the building on Summer Street \$900 is asked for.

The water supply at the Grafton Department is not only insufficient in amount, but has been found by the engineers of the State Department of Health to be objectionable on account of an excess of mineral salts. This has occasioned the State considerable financial loss by injury to the hot and cold water pipes, as well as the boiler tubes. The patients at Grafton have been seriously threatened by a water famine during the last month. Provision should be made by the Legislature as soon as possible for a water supply sufficient for the future needs of the hospital, and one which will furnish us with water that can be economically used.

We believe that the power house and other buildings now emptying their sewage into the Assabet valley should be connected with the main sewerage system at Grafton, as recommended by the State Department of Health. These buildings are located at such a level that the sewage from them cannot be emptied into the main sewer lines without the installation of a pumping plant, funds for which have not heretofore been available. The State Department of Health has authorized



the temporary use of the filter bed in the Assabet valley until funds can be obtained which will render it possible to remedy this situation. The estimated cost of this work is \$1,250.

We also feel that the large number of patients now accommodated at the Grafton Department should be provided with a suitable place in which religious services and entertainments can be held. Church services are now being held in the basement of one of the buildings and entertainments for patients are given in the day room of one of the wards. This building, which could have been erected at a cost of \$75,000 a few years ago, will now cost \$126,000.

If 300 or 400 more patients are to be transferred to the Grafton Department it will be absolutely necessary to have adequate laundry facilities at that place, as the laundry equipment is now very limited. The laundry at the Worcester Department should be remodeled throughout and equipped with new machinery. The washers, extractors and mangle in use at this place are nearly worn out and must be replaced soon. The laundry equipment at Grafton has been so inadequate that the work of that department has always been done at Summer Street in Worcester. With a large increase in the population during the coming year the necessity of purchasing new laundry machinery should be readily apparent.

As the hospital is practically the only one in the State which has no hydrotherapeutic apparatus we would urge that an appropriation be made for this purpose. To purchase and install the necessary equipment, we therefore ask for \$2,400.

The coal used at the Grafton Department is now conveyed to the boiler house by means of a short railway spur from the Boston & Albany tracks. This switch was laid upon a low dirt embankment without any other supports for temporary use and should be replaced by a permanent trestle. The present track has settled in places and is unsafe. A trestle would furnish the hospital with a permanent means of delivering coal and would greatly facilitate its use in the boiler room. A concrete trestle would unquestionably be the cheapest structure to install. When this trestle is erected there should also be a set of track scales as there is no means at the present time of

weighing coal received at the power house. The estimated cost for trestle and scales is \$10,900.

In conclusion, we wish to call your attention to the necessity of making adequate provision for the maintenance of a very largely increased hospital population during the coming year. After a very careful survey of the situation we feel that the \$493,903 asked for for this purpose is absolutely necessary if the hospital is to take care of the population of 1,900, as proposed by the Commission on Mental Diseases. We feel that this is a very low estimate as accommodations will be available for 2,000.

The Board is very firmly of the opinion that the salaries of the physicians and the wages of the employees must be raised if the proper standard of medical care is to be maintained. The hospital staff has included only six physicians with an average hospital population of 1,636 during the year. It has not been possible to obtain the number of employees needed to take care of the patients with the wages we have been compelled to pay on account of lack of funds. We are very strongly of the opinion that this is a matter which should be remedied at the next session of the Legislature.

Respectfully submitted,

LEANDER F. HERRICK,  
MRS. MARGARET A. CASHMAN,  
HENRY J. PERREAULT,  
MRS. GEORGE S. LADD,  
DR. PETER O'SHEA,  
JOHN P. BOWDITCH,  
ROGER CUTLER,

*Trustees.*

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Grafton State Hospital.*

In accordance with the provisions of the statutes, I am submitting for your consideration the thirty-ninth annual report of the Grafton State Hospital for the year ending Nov. 30, 1916.

Dr. Louis H. Stick, who was appointed superintendent of the hospital on April 1, 1912, resigned on March 20, 1916, and was succeeded by the present incumbent, who was appointed by your Board on March 22, and reported for duty on May 8, 1916.

### LEGISLATION AFFECTING THE HOSPITAL.

Chapter 679 of the Acts of 1912, as amended by chapter 456 of the Acts of 1914, and by chapter 170 of the General Acts of 1915, requiring the removal of the patients from the Worcester Department on Summer Street and the sale of that property was repealed by an act passed by the Legislature on June 1, 1916.

#### CHAPTER 283, GENERAL ACTS OF 1916.

##### AN ACT RELATIVE TO THE GRAFTON STATE HOSPITAL.

*Be it enacted, etc., as follows:*

SECTION 1. Section two of chapter six hundred and seventy-nine of the acts of the year nineteen hundred and twelve, as amended by chapter four hundred and fifty-six of the acts of the year nineteen hundred and fourteen, and by chapter one hundred and seventy of the general acts of the year nineteen hundred and fifteen, and sections three and four of the said chapter six hundred and seventy-nine are hereby repealed.

SECTION 2. This act shall take effect upon its passage. [Approved June 1, 1916.]

### MOVEMENT OF POPULATION.

The census of the hospital on Sept. 30, 1915, consisted of 719 men and 895 women, a total of 1,614. Of this number, 1 man and 26 women, — 27 in all, — were boarding out, leaving an actual hospital population of 1,587, — 718 men and 869 women. Three hundred and forty patients were admitted during the

year. Of these, 180 were men and 160 women. Forty-seven of this number, including 31 men and 16 women, were received directly on original commitments and 277, including 144 men and 133 women, by transfer from other hospitals. The whole number of cases treated during the year was 1,954, — 899 men and 1,055 women. Two hundred and four cases, including 89 men and 115 women, were dismissed during the year. Of this number, 28 were discharged, — 4 as recovered, 7 as capable of self-support, 5 as improved, and 12 as not improved. Fifty men and 69 women, — a total of 119, — died during the year, and 8 were transferred to other institutions.

The average daily population of the hospital for the year ending September 30 was 1,636.84. The average daily number boarding out was 33.14. The average daily number under care was 1,669.98. The average daily number of private patients was 5.15.

The number of patients under care on Sept. 30, 1916, was 1,750, 810 men and 940 women. Of these, 810 men and 911 women, — a total of 1,721, — were in the hospital, and 29, — all women, — were boarding out. There were 6 private patients, all of the remainder being State charges.

The psychoses represented by the first admissions during the year were as follows:—

	Men.	Women.	Total.
Epileptic psychoses, . . . . .	15	12	27
General paresis, . . . . .	2	—	2
Imbecility, . . . . .	5	2	7
Psychoses with brain or nervous diseases:—			
Cerebrospinal syphilis, . . . . .	1	1	2
Total, . . . . .	23	15	38

The psychoses represented by all other cases committed during the year were as follows:—

	Men.	Women.	Total.
Epileptic psychoses, . . . . .	5	1	6
General paresis, . . . . .	1	—	1
Imbecility, . . . . .	2	—	2
Total, . . . . .	8	1	9

The psychoses represented by the cases discharged were as follows:—

	Men.	Women.	Total.
Alcoholic psychoses, . . . . .	—	3	3
Dementia præcox, . . . . .	4	3	7
Epileptic psychoses, . . . . .	3	4	7
Imbecility, . . . . .	2	5	7
Manic-depressive insanity, . . . . .	—	3	3
Senile psychoses, . . . . .	—	1	1
Total, . . . . .	9	19	28

The psychoses represented by the deaths occurring during the year were as follows:—

	Men.	Women.	Total.
Alcoholic psychoses, . . . . .	7	4	11
Dementia præcox, . . . . .	9	35	44
Epileptic psychoses, . . . . .	14	10	24
General paresis, . . . . .	7	1	8
Idiocy, . . . . .	1	—	1
Imbecility, . . . . .	2	6	8
Involution melancholia, . . . . .	—	1	1
Manic-depressive insanity, . . . . .	2	4	6
Psychoses with brain or nervous diseases:—			
Arteriosclerosis, . . . . .	1	1	2
Cerebrospinal syphilis, . . . . .	1	—	1
Senile psychoses, . . . . .	6	7	13
Total, . . . . .	50	69	119

#### GENERAL HEALTH OF THE HOSPITAL.

The general health of the hospital population during the year was good. There were numerous cases of influenza and tonsillitis during the winter, and occasional cases of dysentery at Grafton during the summer. Several patients sustained fractures resulting from falls. One fracture of the femur in a patient suffering from general paresis made an amputation necessary. One patient at the Elms group, who had exhibited no previous



suicidal tendencies, succeeded in eluding the vigilance of the employees in charge of a working party long enough to hang himself from the limb of a tree. Although artificial respiration was applied for about one hour, he could not be resuscitated.

The death rate for the year, as based on the whole number of cases under treatment, was 6.09 per cent., and based on the average daily population, 7.01 per cent.

A male attendant died in March, after a short illness, from cerebrospinal meningitis. Three female nurses contracted diphtheria. One died after an operation for mastoiditis. A male employee in the kitchen of the Worcester Department died suddenly in the City Hospital as a result of heart disease. One male attendant at Grafton died from pneumonia following an attack of influenza. A nurse at the Worcester Department died at the Memorial Hospital from meningitis and mastoiditis following measles.

#### EMPLOYEES.

There have been numerous changes in the force of employees during the year. There were 357 persons employed at the institution on Nov. 30, 1916. The changes in the population of employees, as represented by the number of appointments, resignations, discharges, etc., represents a percentage of 298, 1,191 persons having filled 399 positions.

It has not been possible to maintain an adequate force of nurses and attendants to properly look after the patients entrusted to the care of the hospital at the rate of wages heretofore paid. The hours of service are long, the nature of the occupation is not in any way attractive, and the wages paid are entirely too low. It has been especially difficult to keep a sufficient force of employees at the Grafton Department. The only place to which the employees at Grafton can go for recreation when off duty is the city of Worcester, which is 8 miles distant. The round trip car fare of 30 cents is a very serious matter to persons who only receive from \$20 to \$25 per month for their services. There were 33 vacancies for employees on Nov. 30, 1916, owing to the fact that these positions could not be filled at the rate of wages which the appropriation made it possible for us to pay. In many instances employees have left the service of this hospital to go to other institutions

where higher wages were offered. The adoption of a uniform rate of wages to apply to all State hospitals for the insane would remedy this difficulty and operate to the benefit of all concerned. It is useless, however, to adopt a uniform wage schedule, or attempt to put into effect an increased rate of wages, unless the appropriations made by the Legislature will be sufficiently large to cover the needs of the institutions. A uniform rate of wages, if enacted into a law and made statutory, would remedy this difficulty.

#### THE MEDICAL SERVICE OF THE HOSPITAL.

The work of the medical staff has been very seriously hampered by the insufficient number of physicians. During a part of the year there were only two physicians at the Worcester Department taking care of nearly 600 patients, and three physicians at Grafton with nearly 1,200 patients. The salaries which it has been possible to pay with the appropriations available have rendered it almost impossible to secure additional men for the service. Notwithstanding the difficulties with which they have had to contend, the members of the staff have succeeded in carrying on the work of the hospital in a very satisfactory way.

An effort has been made to systematize the medical records of the hospital and a comprehensive system of records, reports, etc., has been adopted. This was necessary for the purpose of covering ground not provided for in the system of records already in use. Staff meetings have been held during the week on Mondays, Wednesdays and Fridays at the Grafton Department, and on Tuesdays, Thursdays and Saturdays at the Worcester Department.

The institution has had no operating room, hydrotherapy, prolonged baths, laboratory or mortuary, and an effort is being made to remedy this situation. A small operating room has been fully equipped at the Worcester Department and arrangements made to have one ready for use within a short time at Grafton. One prolonged bathtub has been installed at Grafton and others will be purchased as soon as funds are available. Your attention is called to the necessity of obtaining additional appropriations for this purpose. A laboratory has been opened at Summer Street and equipped throughout with the apparatus which is needed for clinical work.

The State Board of Insanity, as you know, designated Dr. Douglas A. Thom of Monson as an assistant pathologist, with headquarters at the Worcester Department of this hospital, to do the pathological work of this part of the State for the Board, under the direction of Dr. E. E. Southard, director of the Psychopathic Hospital. Dr. Thom was furnished with maintenance and quarters at the Worcester Department, with the provision that he would do all of the pathological work of the Grafton State Hospital. He has been provided with an office, and has been actively carrying on this work since July 1, 1916. This arrangement will be of material benefit to the institution, and will raise the medical standards of the hospital generally.

Under the direction of the State Board of Insanity arrangements were made during the summer to carry on a special investigation and study of neurosyphilis and its relation to insanity in the wards of the Worcester Department. For this purpose carefully selected cases suitable for treatment with salvarsan, etc., were transferred from other institutions so that this work could be centralized and systematized. Two wards were set apart for this purpose in the buildings on Summer Street, and the work has been carried on very successfully during the summer. On Nov. 17, 1916, a conference was held at the Worcester Department for the discussion of this important subject. The meeting was attended by many representatives of the hospital service of this State, together with men prominent in the medical profession from Connecticut, Rhode Island and various other States. The program of the meeting was as follows:—

1. Remarks.

ABNER POST, M.D., Professor Emeritus of Syphilis, Harvard Medical School.

2. Syphilis and the Problem of the Massachusetts Commission on Mental Diseases.

GEORGE M. KLINE, M.D., Director of the Commission.

3. Response for the Grafton State Hospital.

JAMES V. MAY, M.D., Superintendent, Grafton State Hospital.

4. Results of Systematic Treatment of Fifty Cases of Cerebral Syphilis (Parenchymatous and Meningovascular).

H. C. SOLOMON, M.D., Investigator in Neurosyphilis, Massachusetts Commission, and Acting Clinical Psychiatrist, Psychopathic Hospital.



## 5. Syphilis and Epilepsy.

DOUGLAS A. THOM, M.D., Assistant Pathologist, Massachusetts Commission.

## 6. Demonstration of Specimens in a Case of General Paresis having Catatonic Symptoms.

HAROLD I. GOSLINE, M.D., Pathologist, Worcester State Hospital.

## 7. General Results.

E. E. SOUTHARD, M.D., Pathologist, Massachusetts Commission, and Director, Psychopathic Hospital.

The Commission on Mental Diseases, as announced by Dr. George M. Kline, director, expects to submit for your consideration at a later date a plan for carrying on out-patient work at Summer Street, as well as adopting other features of the Psychopathic Hospital at Boston, and making the building of the Worcester Department a center for the direction of the psychopathic work in the western part of the State.

During the coming year a larger laboratory will be opened at Summer Street, an autopsy room constructed, and a mortuary provided for the care of dead bodies pending their removal by the undertaker.

Arrangements have been made to provide the patients at Grafton with the services of a dentist, which they have not had heretofore, and a dentist is now making regular weekly visits to the hospital. Similar arrangements will be made for the Worcester Department.

The social service work of the institution has been carried on actively during the year. Owing to the limited size of the medical staff it has not been possible to have this work carried on by a physician, and an experienced nurse has been assigned to this duty.

The industrial work of the institution has also been prosecuted vigorously under the supervision of a competent supervisor of industries. The work of the Worcester Department in the male wards has consisted of weaving, mattress and brush making, cabinet work, and in the women's wards of weaving, rug making, knitting, embroidery, etc. The removal of the carpenter shop to Grafton has left space at Summer Street in a separate building which will be devoted hereafter to industrial work. This will make it possible to centralize this work in one place and develop the industries in a more satisfactory way.

The industrial work at the Grafton Department consists of weaving, rug making, basketry and needlework at the Pines A building, and of weaving, knitting stockings, rug making, pottery, metal work, repairing, etc., at the Elms D building. A new industrial unit has been started at the Oaks group, and baskets, brushes and mats are now being made at that place. When the Elms service building is completed the basement of the Elms A building will be used for the industrial work which will be done on a much larger scale.

The medical service of the hospital has been very generally rearranged during the year. All of the epileptics have been removed from the Worcester Department and two buildings set aside for their care at Grafton, the women being housed in the Pines C building and the men in Elms A. There were 222 epileptics in the institution at the end of the year. It will be recalled that all adult insane epileptics have been committed to this institution for some time in accordance with the plan formulated by the State Board of Insanity for their segregation, study and treatment at one place.

The patients suffering from tuberculosis have also been segregated and arrangements made for their special treatment and care at Grafton, the men being transferred to the Elms C building, and a new tubercular ward for women opened in Pines A, where plenty of sunlight is available as well as surroundings which are generally adapted to the care of this class of patients.

The noisy, destructive, violent and disturbed classes generally have been removed from the Summer Street building of the Worcester Department, so as to render that department less objectionable to the community in which it is located. This department will be used hereafter especially for the infirm, senile and feeble patients, the quieter class of chronic patients, and those who are frequently visited by relatives and friends residing in Worcester.

Owing to the inadequate fire protection now available in the building at Summer Street, the infirmary was removed from the third to the first floor. This has resulted in much more satisfactory infirmary wards.

The confusing nomenclature used in designing the various wards, buildings and groups has been replaced by a new and

simpler system. The wards in the Summer Street building have been numbered, the women's wards being designated as Wards 2, 4, 6, 8, 10, 12, 14, 16 and 18, and the wards occupied by the men as Wards 1, 3, 5, 7, 9, 11, 13, 15 and 17. The Grafton Department now includes the administration group, with the administration building, the officers' cottage, the employees' cottage, Maple cottage, Locust cottage and the bungalow. The other groups include the Oaks, Elms, Pines and Willows, the buildings being designated as follows: Oaks A, B, C and D, Elms A, B, C and D, Pines A, B, C and D, and Willows A, B, C and D.

The training school has been carried on very successfully during the year. Miss P. Jean Porteous, who has been assistant superintendent of nurses for some time, has been promoted to the position of superintendent of nurses in general charge of the training school. The instruction at the Worcester Department is under the charge of Mrs. Ena Benson, assistant superintendent of nurses. The junior class at the Grafton Department consists of 14 nurses, the intermediate class of 14, and the senior class of 3. At the Worcester Department there are 11 in the junior class, 2 in the intermediate, and 8 in the senior class, the course of instruction outlined by the Commission on Mental Diseases being followed throughout. An adequate lecture room has been provided for the training school at the Worcester Department. In accordance with the instructions of the Commission on Mental Diseases a school for attendants has been instituted at both the Grafton and Worcester departments. The commencement exercises of the training school were held on Oct. 5, 1916, at Grafton, the annual address to the graduating class being delivered by Dr. Peter O. Shea of your Board. Ten nurses received diplomas.

#### CHANGES IN THE MEDICAL STAFF.

Dr. Donald R. Gilfillan, assistant physician, resigned on March 21, 1916, to accept a position at the Worcester State Hospital. His place was filled by the reappointment of Dr. George K. Butterfield, who was formerly a member of the staff at the Grafton Department. Dr. Hiram L. Horsman was pro-

moted from the position of senior assistant physician to first assistant physician on Oct. 17, 1916.

At least two more assistant physicians are needed at the Grafton Department, the number of physicians at that place being entirely inadequate for the number of patients cared for.

#### IMPROVEMENTS DURING THE YEAR.

##### *Worcester Department.*

Fire companies were organized at both the Grafton and Worcester departments during the summer and hose rooms at each of these places equipped with such fire apparatus as was available without a special appropriation for the purpose. Successful fire drills are being held at both departments at frequent intervals.

Several of the wards in the building at Summer Street have been painted and generally repaired. A number of spray rooms have been renovated and repainted. The chapel has been re-decorated and repainted. Linoleum has been installed on several of the wards. The building occupied heretofore by the carpenter shop has been connected with the sewerage system. A new heater has been installed at the greenhouse.

The refrigerators adjoining the kitchen were in such bad condition that they had to be repaired during the summer. A new waterproof cement roof was installed, and the refrigerators which had been leaking badly for some time are now dry. New brine pipes had to be installed in the refrigerating plant in the power house as the old brine pipes were entirely worn out.

The roof of one of the ovens in the bakery, which collapsed during the summer, was rebuilt. The old clothes room in the day room of Ward 9 was removed during the summer for the purpose of enlarging the facilities of that ward for the care of the cases of general paresis and brain syphilis. The remodeling of the laundry at Summer Street, which has been in a very unsatisfactory condition, has been undertaken and a new drying tumbler and washing machine purchased. A metal ceiling will be installed in the wash room within the near future.

The old wooden meat and garbage barrels used in the kitchen have been replaced by galvanized iron meat and garbage cans.



The wooden tanks used for storing corned beef in the refrigerator have been removed and replaced by sanitary stone jars. Material has been purchased for remodeling and insulating the refrigerators which have been in such a condition that a proper temperature could not be maintained for the care of meat, butter, eggs, etc.

Over 30 male patients who have been obliged to sleep on mattresses on the floor of the corridors have been transferred to the Grafton Department and the use of floor mattresses done away with, except where made necessary for medical or surgical reasons.

#### *Grafton Department.*

Seven of the ten empty buildings at Grafton have been occupied during the summer, and the others will be in use during the next few months. The administration building was occupied on May 8, 1916, and was partially furnished and equipped with an appropriation which was made available by the Legislature at its last session. In accordance with the instructions of your Board the administration of the hospital is now being conducted at the Grafton Department instead of at Worcester as heretofore. The offices of the superintendent, treasurer and steward were all removed during the summer to the administration building at Grafton. The officers' cottage, formerly known as the matron's cottage, was completed and furnished during the summer, and is now occupied by various officers and employees who are on duty in the administration building.

A new and permanent road and cinder walks were installed in front of the administration building. A large amount of grading has been done around this building, although this is not yet completed owing to the large amount of filling which is required. All of the old stone and wire fences and various other obstructions around the administration building and Maple cottage have been removed.

A hose room has been established near the employees' cottage as the headquarters of the fire department at Grafton and is equipped with a hose wagon, fire ladders, chemical engine, fire extinguishers and all other fire apparatus available for the protection of the buildings of the various groups. Fire rules governing the department have been posted through-

out all of the buildings and a permanent fire department organized.

The patients were removed from Locust cottage and housed in other buildings where they can be given better supervision and more suitable accommodations.

The pond back of the Oaks group, which has served no purpose other than that of breeding mosquitoes, was drained during the summer and the land used for agricultural purposes. Ten patients formerly cared for in the Oaks farmhouse have been removed to other buildings where they can be given better care. The space formerly occupied by these patients is now being used by the industrial department at the Oaks group, which promises to furnish satisfactory occupation for the patients in that group and make it possible to manufacture baskets, mats, brooms and other things badly needed by the hospital.

The Oaks D building has been completed, equipped and occupied during the year. All of the material necessary for completing and remodeling the Oaks service building was purchased by the State Board of Insanity during the summer, and this building will be finished and occupied during the coming winter. A new road leading to the service building of this group has been recently completed and will greatly facilitate the delivering of supplies.

As you know, the hay barn at this group was destroyed by fire on Oct. 25, 1916. The origin of the fire has never been discovered, although a very careful investigation was made at the time.

Considerable grading has been done at the Oaks group during the year and the piggeries have been connected with the water supply by a new pipe line which was put in during the summer.

The Elms C building, which has been empty for some time, was occupied during the summer and now houses nearly 100 patients. The Elms B building will be equipped and occupied as soon as it can be connected with the main steam line which is practically completed. A considerable amount of grading has been done around the Elms group during the summer by the patients. The Elms service building, which was practically finished during the summer, will be occupied during the next

few months. The kitchen equipment is now being installed by the hospital employees. A terrazzo floor is being laid in the room to be used as a kitchen and the building will soon be ready for painting, which is also to be done by the hospital.

As the Grafton Department is so far removed from the city it has been found necessary to furnish the employees at that place with some facilities for recreation and amusement during the hours when they are not on duty on the wards. With this object in view the basement of the male nurses' home has been used for quarters for "the Employees' Club of the Grafton State Hospital" which was organized during the past summer. One room has already been occupied as a pool room, and a store has been opened by the club which will supply the members and other employees with tobacco, candy and other articles which will add greatly to their comfort and convenience. The club is supported entirely by contributions from employees and will be maintained by them. It has given several dances recently which have been very much appreciated by the nurses and attendants.

An appropriation of \$23,000 was made available by the Legislature at its last session for installing a steam line between the Elms B building and the main power plant. All of the materials for this work were purchased by the State Board of Insanity, and contracts awarded after advertising for competitive bids. The work of installation has been done by the hospital forces and is now practically completed, although the line has not as yet been connected with the boilers in the power plant.

The contracts awarded by the State Board of Insanity also called for the removal of the two boilers at the Elms boiler house and their installation in the main power plant. This will result in a very large saving, made necessary by the cartage of coal to the Elms group, and will also reduce the number of employees necessary in the engineering department.

The remodeling of the heating plant, as planned by the engineers of the State Board of Insanity, includes the building of a concrete chimney 150 feet high and 7 feet wide. This is partially completed at the present time and will probably be ready for use by the first of January.

The storehouse building, which has been empty for some time, was occupied during the month of August and the store removed to that place from the building on Summer Street. All of the supplies which have heretofore been hauled from Summer Street to Grafton are now being issued from the new storehouse. As there are nearly 1,200 patients and over 250 employees at Grafton with only 550 patients in the Worcester Department, the advisability of issuing supplies from the new storehouse cannot be questioned. It will result in a considerable saving to the hospital.

The machinery in the carpenter shop at Summer Street has been removed to the new shop building at Grafton, which has heretofore been unused. The paint shop, which was formerly in the laundry and bakery building, has also been removed to this place. The old blacksmith shop was abandoned during the summer, and the work of the blacksmith is now being done in the room designed for that purpose in the shop building.

The Pines A building, as already stated, was remodeled during the summer for the use of the female tubercular patients. The storehouse and carpenter shop buildings are now being connected with the new steam line, as they were not provided with any heating facilities heretofore.

The sewage from the power house has been emptied for some time in a filter bed in the Assabet valley. The State Department of Health has authorized the use of this filter bed for the disposal of the sewage from the power house, storehouse and carpenter shop buildings until other arrangements can be made. These buildings unfortunately are located below the level of the main sewer line, and the sewage will have to be pumped to a higher level before these buildings can be connected with the main sewer lines.

The mending room has been removed from the Pines B building to a more convenient place in the laundry building.

The old bakery in the laundry and power house building, which has never been used since it was finished, is now being remodeled. The two ovens have been removed to the room formerly occupied by the carpenter shop and an additional oven installed. The room used heretofore as a paint shop will be used for the storage of flour, and it is expected that the



bakery will be ready for use some time during the coming winter.

The removal of the bakery, as described, will render additional space available for the laundry which is badly in need of new machinery and other facilities. A new drying tumbler, a washer and extractor were added to the laundry equipment at Grafton during the summer, and the laundry work of this department is now being done at Grafton instead of being sent to Summer Street, as was formerly done. This will be a great convenience to the Grafton Department and will save a great deal of time and some expense in hauling the laundry to Worcester.

A part of the upper floor of the Pines A building will be remodeled during the winter and an infirmary ward established at that place.

A scullery has been completed in the lower floor of the Pines service building, thereby enabling us to use a dining room which will accommodate nearly 100 patients and which was used formerly as a scullery. This will also render it possible to care for about 50 more patients in the Pines D building which has only been partially occupied.

The Willows farmhouse is now being rebuilt and remodeled. The new addition is now under roof, and the building will be completed during the coming winter. This work is being done with an appropriation of \$2,300 which was rendered available by the Legislature.

The new Willows nurses' home, which has been vacant for some time, was occupied during the summer and now furnishes accommodations for 39 employees.

The nurses and attendants who occupied rooms formerly in the upper floor of the Willows service building have been given quarters elsewhere, and a new ward opened in that building which now furnishes accommodations for 20 parole patients and will have twenty more beds in the large room at the east end of the building.

The refrigerator in the Pines service building, which was never insulated, has been rebuilt during the summer and will greatly facilitate the care of food supplies at that place. It will also be necessary to remodel the refrigerator in the Willows service building.

The use of the building designed for a carpenter shop at Grafton will make it possible within a short time to remove all of the lumber stored in the basement of the building at Summer Street, which has constituted such a fire menace at that place.

To comply with the requirements of the Boston & Albany Railroad, extensive repairs have been made to the bridge crossing the railroad track running through the hospital grounds at Grafton. The cost of this work was approximately \$900.

All of the pigs were immunized during the summer under the direction of the State Department of Health.

A cement floor has been placed in the basement in the room at the north end of the bungalow building. This room will be used temporarily as a mattress shop, which has been very badly needed.

Window guards have been purchased for the Oaks C building and a dining room is being installed in the basement of Pines D for the patients who cannot go to the service building.

Signs have been placed on the buildings at Grafton for the convenience of visitors.

An estimate system has been in use since June 1, 1916, showing in detail all items which are to be charged to the maintenance funds of the hospital, and all estimates are revised and approved by the Board of Trustees in advance of any expenditures.

The dining room and kitchen service of the hospital will hereafter be under the charge of a dietitian. All food supplies used in the kitchen are weighed. Accurate reports are made by the dietitian of all kitchen and dining-room waste. Supplies of all kinds are now issued on requisitions, and the food used is purchased on a definite ration basis.

## NEEDS OF THE HOSPITAL FOR THE COMING YEAR.

### *Special Appropriations.*

1. Remodeling heating plant, Worcester Department, \$63,000. The building at Summer Street is heated at the present time by an indirect system which has been in use since 1856. A fan 14 feet in diameter and 7 feet wide forces air which enters the power house from the outside through a conduit to the main

building. This conduit is about 22 feet wide and 110 feet long. The air is heated while passing through this air chamber by over 31,000 feet of steam pipes, and enters the main building through the basement which extends under all of the wards and wings. There is also in this basement a track over which food cars convey food from the main kitchen to the various dining rooms. The heated air, after entering the basement, is supposed to make its way through various flues to the different wards of the building above. It conveys with it, naturally, the odors of food which enter the basement from the kitchen. When the fan is running at its maximum capacity no air currents can be distinguished at the extreme ends of the building. The wards have not been properly heated and the officers, employees and patients are all said to have suffered from the cold during the winter months. If patients are to be cared for in this building, a new heating plant is an urgent necessity.

2. Refrigerating and ice-making machinery and insulation of refrigerators, storehouse, Grafton Department, \$9,000. During the coming year there will be approximately 1,450 patients at Grafton and 550 patients at the Worcester Department. All general supplies which were formerly issued from the storehouse at Summer Street are now being issued from the storehouse at the Grafton Department. It is, however, still necessary to issue the meats, butter, eggs, etc., from the Worcester Department, as no provision has been made heretofore for refrigerators in the storehouse at Grafton. It will be readily apparent that these articles should be issued from the storehouse which is located at Grafton, where 75 per cent. of the population of the hospital will be. It will certainly be a source of considerable economy to handle all supplies at the storehouse. This will do away with a great deal of cartage which has been necessary, and will render it possible to issue fresh meats to the various kitchens at the Grafton Department in good condition. This has not always been possible heretofore during the hot summer weather. An automatic refrigerating machine will be necessary owing to the fact that there is no room in the power plant for a compressor or condenser, nor is there any room in the power plant for an ice-making machine. An ice-making machine of about 500 pounds capacity is necessary for supplying ice for drinking

water, as it is not advisable to use ice from the pond for this purpose. The amount asked for will, I think, be enough to cover the construction of the refrigerators, their insulation and the installation of a small ice-making machine, together with an automatic refrigerating machine.

3. Coal trestle, Grafton Department, \$10,000. All of the coal used at the main power plant at the Grafton Department is now conveyed to the boiler house by means of a short railway spur from the Boston & Albany tracks. This switch was laid upon a low dirt embankment without any other supports for temporary use and should be replaced by a permanent trestle. The present track has settled in places to such an extent as to render it somewhat unsafe. A trestle would furnish the institution with a permanent means of delivering coal at the power plant, and would greatly facilitate the hauling of coal into the boiler room. A concrete trestle would unquestionably be the cheapest structure in the long run.

4. Track scales, Grafton Department, \$900. As there is no means at the present time of weighing coal received at the power house, it is suggested that the installation of track scales would be highly desirable for this purpose. This would enable us to check up the weight of coal received with the railroad and mine weights of the coal delivered.

5. Furniture and equipment for additional patients at Grafton, \$3,000. This appropriation is requested for the purpose of rendering additional accommodations available for about 300 patients at the Grafton Department. One hundred and twenty patients will be cared for in the Elms C building, 120 in Elms B, 60 in Oaks D, 50 in Pines D, and 20 in the Willows service building. An appropriation of \$1,000 was made at the last session of the Legislature for furnishing and equipping two of these buildings. It, however, was only sufficient for the purchase of beds, mattresses, pillows, blankets and sheets for 53 patients. The amount asked for will only be sufficient for a very meager equipment of these buildings. The amount required is so large that the trustees do not feel that it is a proper charge against the maintenance funds of the hospital.

6. Combination chemical and hose wagon, Grafton Department, \$2,500. The recent fire at the Oaks group called atten-



tion to the inadequate fire protection which is available generally at the Grafton Department. It is impossible to use any additional pressure for fires owing to the fact that the hot-water pipes, which have been seriously injured by the mineral content of the only water supply at the command of the hospital, will not stand the pressure required. To remedy this situation it would be necessary to install separate water lines much larger in size. Owing to the hilly nature of the ground and the present condition of the roads, it would be impossible to use a fire engine. Under the circumstances I would suggest for your consideration the advisability of purchasing a combination chemical and hose wagon which can be obtained at a price of about \$2,500. This could be stationed in the present hose house adjoining the employees' cottage, and would afford a much better protection from fire for the numerous buildings at Grafton than could be obtained in any other way.

7. Fireproof record room, Worcester Department, \$900. This amount of money is asked for to render fireproof the room in which the records of the Worcester Department are now kept in the building on Summer Street. A fireproof record room is required by the Commissioner of Public Records and is necessary if the laws of the State are to be complied with.

8. Sewage connections, power house, carpenter shop and storehouse, Grafton Department, \$1,250. The power house, carpenter shop and storehouse buildings at Grafton are located at such a level that the sewage from these buildings cannot be emptied into the main sewer lines without the installation of a pumping plant. Permission has been obtained from the State Department of Health to empty the sewage from these buildings into the filter bed located in the Assabet valley, a short distance from the power house, until funds can be obtained which will render it possible to connect these buildings with the main sewer lines. The State Department of Health objects very strongly to the emptying of sewage into the Assabet valley.

9. Chapel and assembly hall, Grafton Department, \$126,000. Blue prints showing the plan of the proposed chapel and assembly hall for the Grafton Department have been submitted to the Commission. The only place available for religious serv-

ices at the present time at the Grafton Department is the basement of one of the buildings occupied by women. It is not a suitable place for this purpose, although Protestant, Catholic and Jewish services have been held regularly for the benefit of patients. There is no place available for the entertainment of the 1,200 patients at the Grafton Department except the day room of one of the wards occupied by patients. It is certainly highly important that a building for these various purposes should be erected at the earliest possible opportunity. With the certainty of caring for 2,000 patients during the coming year and a probable increase over that number later, it would not be possible to erect a suitable building for religious services, entertainments, etc., at present prices and of sufficient size for less than \$126,000.

10. Fire protection, fire escapes, fireproof stairways and standpipes, \$12,125. The inspectors of the District Police have, on several occasions, called attention to the necessity of additional fire protection for both the Worcester and Grafton departments of the hospital. The only exits from the third floor of the building of the Worcester Department on Summer Street are through narrow wooden stairways which would not furnish a satisfactory method of escape in the event of a fire. The only fire escape on this building, which houses 550 patients, is one on the central portion of the building occupied by the administrative departments and which does not extend to the ground. The narrow stairways should be replaced by modern stairways of fireproof construction, and a sufficient number of fire escapes provided to make it possible to remove the patients from the building with safety. There is not an adequate number of standpipes in this building to furnish the proper degree of fire protection.

There are no fire escapes on the male nurses' home or the Pines nurses' home for women at Grafton. These are both three-story buildings and occupied by numerous employees. There are no fire escapes on the building at Grafton which is occupied by the laundry, bakery and power house. There are employees living on the third floor of this building. The necessity of fire escapes for these buildings has been emphasized by the fire inspectors. No standpipes were installed in Pines A,

Pines C or Elms A buildings. These are all buildings housing a large number of patients and not properly protected from fire.

11. Laundry machinery, \$7,000. The laundry at the Worcester Department should be remodeled throughout and equipped with new machinery. The washers, extractors and mangle in use at this place are so old that they are not entirely safe to use and must be replaced soon. The laundry equipment at Grafton has never been sufficient to render it possible to do all of the work of that department which, for many years, has been done at Summer Street in Worcester. With the prospect of caring for 2,000 patients at this place, the necessity of purchasing new laundry machinery should be readily apparent.

12. Hydrotherapeutic apparatus, \$2,400. In this institution, which is the largest hospital for the insane in the State, there is, with the exception of one prolonged bathtub which was purchased during the last few months, no hydrotherapeutic apparatus. The trustees are of the opinion that the equipment of a modern hospital for the care of the insane is not complete without a hydrotherapy room and tubs for prolonged baths. The amount asked for is not sufficient to meet the needs of the institution at this time.

13. Additional water supply. The present water supply of the Grafton Department of the hospital consists of 10 2½-inch driven wells near the main power plant and 30 wells of the same description at the Valley farm. The water from the wells near the power plant, which contained less than 2 parts per 100,000 of hardness in 1909, is now unfit for use and has not been used for over one year. An examination of the water supply at the Valley farm by the engineering department of the State Department of Health and made at the request of the superintendent, shows that the water supply at that place is very uncertain, both as to quantity and quality. Some wells show 8 parts, some 17, and some 50 parts of hardness per 100,000. It is very doubtful whether the quantity of water obtainable from the wells will be sufficient for the future needs of the institution with an increased population of both patients and employees. As the State Department of Health has not made any definite report as yet on the situation, we

are not in a position to suggest a remedy or give any estimate as to the probable cost involved in obtaining a new and adequate supply of water.

*Maintenance.*

The appropriation necessary for the maintenance of the hospital for the coming year will amount to \$493,903, which is \$91,120.56 more than the amount expended during the present year. The necessity for a larger appropriation is very readily explained. The average daily population of the hospital during the year ending September 30 was 1,636.84. The average daily population for the ensuing year, as estimated by the Commission on Mental Diseases, will be 1,900. The population will be over 2,000 before the end of the year, an increase of  $12\frac{1}{2}$  per cent. The increase in the cost of food supplies at the rate estimated by the Commission will be \$39,000, which is an increase of \$23 per capita. The increase in the cost of furnishings and household supplies over the present year will amount to \$2,500. The increase in the cost of clothing alone will amount to \$3,000. The increase in the amount requested for salaries and wages is made necessary by the additional employees which will be required to care for a larger population. The wages of the additional employees alone will amount to \$15,000 during the eight months of the year, which period their employment will probably cover.

Owing to the necessity of obtaining a sufficient force of employees to take care of 2,000 patients, it will be necessary for us to make some slight increases in compensation offered to employees in the Grafton Department. The total increase of wages, as requested, amounts to only \$7,000, which includes the Worcester Department.

The per capita cost of maintenance of this institution during the year ending Nov. 30, 1915, was \$4.59 per week, or \$238.68 per year. The per capita cost for the present year was \$4.58 per week, or \$238.32 per year. The cost for next year, if the amount requested for maintenance is appropriated for that purpose, will be approximately \$4.99 per week, which is a very reasonable per capita considering the increase in the cost of all commodities.



The appropriation for the present year would not have been sufficient to have enabled us to pay the salaries and wages of a full force of employees if they could have been obtained. There have been only three assistant physicians at Grafton with nearly 1,200 patients. The highest salary paid to any of these physicians was \$1,200 per year.

In view of the fact that the department at Grafton is in an incompleated state and has never been supplied with the furniture, furnishings and equipment needed, we feel that the amounts requested for the maintenance of the hospital are so conservative that no reduction should be considered.

Respectfully submitted,

JAMES V. MAY,  
*Superintendent.*

## TREASURER'S REPORT.

*To the Trustees of the Grafton State Hospital.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1916:—

CASH ACCOUNT.			
Balance Dec. 1, 1915,	.	.	\$16,436 71
<i>Receipts.</i>			
<i>Institution Receipts.</i>			
Board of inmates:—			
Private,	.	\$1,344 21	
Reimbursements, insane,	.	11,227 73	
		<hr/>	\$12,571 94
Sales:—			
Travel, transportation and office expenses,	.	\$31 00	
Clothing and materials,	.	516 83	
Furnishings and household supplies,	.	29 06	
Medical and general care,	.	166 96	
Farm and stable:—			
Cows and calves,	\$205 50		
Hides,	61 37		
Use of teams,	3 50		
		<hr/>	
		270 37	
Repairs, ordinary,	.	998 32	
		<hr/>	2,012 54
Miscellaneous receipts:—			
Interest on bank balances,	.	\$289 99	
Sundries,	.	124 71	
		<hr/>	414 70
			14,999 18
Sales, account of industries fund,	.	.	300 71
<i>Receipts from Treasury of Commonwealth.</i>			
Maintenance appropriations:—			
Balance of 1915,	.	\$11,942 32	
Advance money (amount on hand Nov. 30),	.	25,000 00	
Approved schedules of 1916,	.	\$357,935 44	
Less returned,	.	66 16	
		<hr/>	357,869 28
			<hr/>
Special appropriations,	.	.	394,811 <sup>60</sup> 60
Industries fund,	.	.	3,214 <sup>61</sup> 61
			<hr/>
			204 <sup>72</sup> 72
Total,	.	.	<hr/> \$429,967 53

*Payments.*

## To treasury of Commonwealth: —

Institution receipts, . . . . .	\$14,999 18
Industries fund, . . . . .	300 71

## Maintenance appropriations: —

Balance November schedule, 1915, . . . . .	\$28,379 03
Eleven months' schedules, 1916, . . . . .	357,869 28
November advances, . . . . .	14,583 08
	<hr/>
	400,831 39

## Special appropriations: —

Approved schedules, . . . . .	\$3,214 61
November advances, . . . . .	267 00
	<hr/>
	3,481 61

## Industries fund: —

Approved schedules, . . . . .	204 72
Balance, Nov. 30, 1916: —	

In bank, . . . . .	\$9,545 05
In office, . . . . .	604 87
	<hr/>
	10,149 92

Total, . . . . .	\$429,967 53
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## MAINTENANCE.

Appropriation, current year, . . . . .	\$402,782 44
Balance from previous year, brought forward, . . . . .	298 30

Total, . . . . .	\$403,080 74
Expenses (as analyzed below), . . . . .	401,784 23

Balance reverting to treasury of Commonwealth, . . . . .	\$1,296 51
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## ANALYSIS OF EXPENSES.

## Salaries, wages: —

H. Louis Stick, M.D., superintendent, . . . . .	\$1,314 52
James V. May, M.D., superintendent, . . . . .	2,528 23
General administration, . . . . .	47,934 07
Medical service, . . . . .	8,709 94
Ward service (male), . . . . .	26,139 10
Ward service (female), . . . . .	28,272 23
Repairs, . . . . .	15,762 54
Farm and stable, . . . . .	21,275 34
Grounds, . . . . .	1,398 20
	<hr/>
	\$153,334 17

## Religious instruction: —

Catholic, . . . . .	\$600 00
Jewish, . . . . .	300 00
Protestant, . . . . .	473 80
	<hr/>
	1,373 80

## Travel, transportation and office expenses: —

Advertising, . . . . .	\$15 71
Automobiles, . . . . .	1,505 00
Automobile repairs and supplies, . . . . .	3,520 83
Postage, . . . . .	514 85
Printing and binding, . . . . .	851 34
	<hr/>

Amounts carried forward, . . . . .	\$6,407 73	\$154,707 97
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<i>Amounts brought forward,</i>	\$6,407 73	\$154,707 97
Travel, transportation and office expenses — <i>Con.</i>		
Printing annual report,	194 11	
Stationery and office supplies,	1,222 62	
Telephone and telegraph,	1,146 24	
Travel,	1,117 04	
Sundries,	132 69	
Freight,	11 63	
		10,232 06
Food: —		
Butter,	\$6,412 98	
Butterine,	7,219 58	
Beans,	2,323 45	
Bread, crackers, etc.,	585 10	
Canned soups,	44	
Cereals, rice, meal, etc.,	2,391 92	
Cheese,	983 84	
Eggs,	1,380 24	
Flour,	15,080 33	
Fish (fresh, cured and canned),	3,552 95	
Fruit (fresh),	1,334 94	
Fruit (dried and preserved),	2,664 51	
Lard and substitutes,	1,401 25	
Macaroni and spaghetti,	343 74	
Meats,	25,080 41	
Milk (fresh and substitutes),	8,449 20	
Molasses and syrup,	1,144 19	
Potatoes,	8,617 20	
Seasonings and condiments,	669 23	
Sugar,	4,907 82	
Tea, coffee, cocoa, etc.,	3,437 01	
Vegetables (fresh),	3,161 32	
Vegetables (canned and dried),	155 92	
Yeast, baking powder, etc.,	344 54	
Sundries,	269 98	
Freight,	615 54	
		102,527 63
Clothing and materials: —		
Boots, shoes and rubbers,	\$3,258 26	
Clothing (outer),	3,859 74	
Clothing (under),	514 81	
Dry goods for clothing,	1,723 87	
Hats and caps,	56 08	
Leather and shoe findings,	322 23	
Machinery for manufacturing,	508 08	
Socks and smallwares,	744 38	
Sundries,	3 57	
Freight,	53 61	
		11,044 63
Furnishings and household supplies: —		
Beds, bedding, etc.,	\$10,639 66	
Carpets, rugs, etc.,	968 30	
Crockery, glassware, cutlery, etc.,	1,236 75	
Dry goods and smallwares,	3,818 56	
<i>Amounts carried forward,</i>	\$16,663 27	\$278,512 29

<i>Amounts brought forward,</i>	\$16,663 27	\$278,512 29
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Furnishings and household supplies — *Con.*

Fire hose and extinguishers,	839 82	
Furniture, upholstery, etc.,	2,094 47	
Kitchen and household wares,	4,310 04	
Laundry supplies and materials,	4,886 07	
Lavatory supplies and disinfectants,	820 02	
Machinery for manufacturing,	455 46	
Table linen, paper napkins, towels, etc.,	830 48	
Sundries,	607 06	
Freight,	186 29	
	<hr/>	31,692 98

## Medical and general care:—

Books, periodicals, etc.,	\$419 62	
Entertainments, games, etc.,	1,312 12	
Funeral expenses,	986 00	
Gratuities,	11 50	
Ice and refrigeration,	601 11	
Laboratory supplies and apparatus,	489 72	
Medicines (supplies and apparatus),	1,291 64	
Medical attendance (extra),	361 74	
Patients boarded out,	5,191 17	
Return of runaways,	296 43	
Sputum cups, etc.,	7 35	
Tobacco, pipes, matches,	1,336 71	
Water,	1,950 46	
Sundries,	635 06	
Freight,	46 57	
	<hr/>	14,937 20

## Heat, light and power:—

Coal,	\$30,908 20	
Freight on coal and other expenses,	6,100 73	
Gas,	15 55	
Oil,	361 44	
Operating supplies for boilers and engines,	819 83	
Sundries,	84 43	
Freight,	24 08	
	<hr/>	38,314 26

## Farm and stable:—

Bedding materials,	\$997 45	
Blacksmithing and supplies,	320 99	
Carriages, wagons and repairs,	213 52	
Dairy equipment and supplies,	173 80	
Fencing materials,	17 40	
Fertilizers,	1,295 50	
Grain, etc.,	7,760 63	
Hay,	6,283 82	
Harnesses and repairs,	152 29	
Other live stock,	832 16	
Road work and materials,	48 02	
Spraying materials,	126 73	
Stable and barn supplies,	227 40	
Tools, implements, machines, etc.,	536 74	

<i>Amounts carried forward,</i>	\$18,986 45	\$363,456 73
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<i>Amounts brought forward,</i>	\$18,986 45	\$363,456 73
<b>Farm and stable — <i>Con.</i></b>		
Trees, vines, seeds, etc.,	748 46	
Veterinary services, supplies, etc.,	91 00	
Sundries,	97 98	
Freight,	146 42	
		20,070 31
<b>Grounds:—</b>		
Tools, implements, machines, etc.,	\$100 29	
Trees, vines, shrubs, seeds, etc.,	84 47	
Sundries,	15 00	
Freight,	12 81	
		212 57
<b>Repairs, ordinary:—</b>		
Cement, lime, crushed stone, etc.,	\$595 79	
Electrical work and supplies,	1,383 42	
Hardware, iron, steel, etc.,	2,211 59	
Lumber, etc. (including finished products),	1,546 00	
Paint, oil, glass, etc.,	1,779 03	
Plumbing and supplies,	1,980 91	
Roofing and materials,	574 51	
Steam fittings and supplies,	1,914 70	
Tools, machines, etc.,	122 16	
Boilers, repairs,	310 31	
Dynamos, repairs,	65 73	
Engines, repairs,	34 99	
Sundries,	277 77	
Freight,	116 34	
		12,913 25
<b>Repairs and renewals:—</b>		
Bridge,	\$965 00	
Electrical work,	812 68	
Elevators,	278 20	
Painting,	285 08	
Freight,	5 16	
Plumbing,	1,465 62	
Refrigeration,	1,319 63	
		5,131 37
<b>Total expenses for maintenance,</b>		\$401,784 23

## SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1915,		\$5,783 05
Expended during the year (see statement annexed),	\$3,214 61	
Reverting to treasury of Commonwealth,	4 13	
		3,218 74
<b>Balance Nov. 30, 1916,</b>		\$2,564 31

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$10,149 92	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$14,583 08	
Account of special appropriations, . . . . .	267 00	
	<hr/>	14,850 08
Due from treasury of Commonwealth from available appropriation account November, 1916, schedule, . . . . .	18,914 95	
	<hr/>	\$43,914 95

*Liabilities.*

Schedule of November bills, . . . . .	\$43,914 95
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## PER CAPITA.

During the year the average number of inmates has been 1,686.36.

Total cost for maintenance, \$401,784.23.

Equal to a weekly per capita cost of \$4.581.

Receipt from sales, \$2,012.54.

Equal to a weekly per capita of \$0.023.

All other institution receipts, \$12,986.64.

Equal to a weekly per capita of \$0.148.

## INDUSTRIES FUND.

Balance Dec. 1, 1915, . . . . .	\$139 64
Receipts credited, . . . . .	300 71
	<hr/>
	\$440 35
Expenditures, approved schedules (see statement annexed), . . . . .	\$204 72
Balance Nov. 30, 1916, . . . . .	235 63
	<hr/>
	\$440 35

## INDUSTRIES.

*Expenditures.*

Instructors, . . . . .	\$20 22
Tools and machinery:—	
Needles, machine, . . . . .	\$10 14
Needles, knitting, . . . . .	10 06
Looms, . . . . .	102 50
Dobby, . . . . .	11 00
Shuttle, . . . . .	6 00
	<hr/>
	139 70
Materials:—	
Jute, . . . . .	6 00
Rental of tables at fair, . . . . .	\$1 13
Expenses to and from fair, . . . . .	11 62
Electric work and booth at fair, . . . . .	6 05
Rent of booth New England Fair, . . . . .	20 00
	<hr/>
	38 80
	<hr/>
	\$204 72



*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Grafton Colony construction, . . . . .	1912, chap. 679; 1914, chap. 30, . . . . .	\$410,000 00	\$2,360 85	\$409,191 53	\$808 47
Repairing old house at colony No. 2, . . . . .	1913, chap. 133, . . . . .	3,300 00	141 15	1,609 20	1,690 80
New boiler, . . . . .	1913, chap. 133, . . . . .	2,000 00	1 22	1,998 85	1 15 <sup>1</sup>
Filter-bed enlargement, . . . . .	1913, chap. 133; 1914, chap. 129, . . . . .	35,000 00	469 07	34,998 32	1 68 <sup>1</sup>
Motor generator, . . . . .	1913, chap. 133, . . . . .	5,900 00	39 50	5,899 00	1 00 <sup>1</sup>
Female nurses' home, . . . . .	1913, chap. 133, . . . . .	36,300 00	—	36,234 96	65 04
Boiler, . . . . .	1914, chap. 129, . . . . .	2,500 00	202 82	2,499 70	30 <sup>1</sup>
		\$495,000 00	\$3,214 61	\$492,431 56	\$2,564 31

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

JAMES V. MAY,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK.

## INMATES' FUND.

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Cash on hand Dec. 1, 1915, . . . . .	\$6,407 34
Received from inmates, . . . . .	\$1,528 63
Interest, Worcester Trust Company, . . . . .	62 09
Interest, Mechanics Savings Bank, . . . . .	110 50
	<hr/> 1,701 22
	<hr/> \$8,108 56
Cash refunded, . . . . .	1,454 96
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Balance, Nov. 30, 1916 (Worcester Trust Company, \$3,746.87; Mechanics Savings Bank, \$2,845.82; drawer, \$60.91), . . . . .	\$6,653 60

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## VALUATION.

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Travel, transportation and office expenses, . . . . .	\$1,391 00
Food, . . . . .	3,873 00
Clothing, . . . . .	16,861 00
Furnishings, . . . . .	65,065 00
Heat, light and power, . . . . .	6,183 00
Repairs and improvements, . . . . .	19,719 00
Farm, stable and grounds, . . . . .	30,145 00
Medical and general care, . . . . .	2,781 00
Industries, . . . . .	2,635 00
	<hr/> \$148,653 00



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# STATISTICAL TABLES.

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(FORM PRESCRIBED BY STATE BOARD OF INSANITY.)

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# STATISTICAL TABLES.

## 1.—General Statistics for the Year.

	INSANE.		
	Males.	Females.	Totals.
Patients under care Sept. 30, 1915, . . . . .	719	895	1,614
In hospital, . . . . .	718	869	1,587
In family care, . . . . .	1	26	27
Viz.: regularly committed, . . . . .	—	—	—
emergency, . . . . .	—	—	—
transfer, . . . . .	718	895	1,613
voluntary, . . . . .	1	—	1
temporary care, . . . . .	—	—	—
Admitted within the year, . . . . .	180	160	340
Viz.: by regular commitment, . . . . .	31	16	47
emergency, . . . . .	—	—	—
voluntary, . . . . .	—	—	—
temporary care, . . . . .	—	—	—
Viz.: observation, . . . . .	—	—	—
others, . . . . .	—	—	—
by transfer, . . . . .	144	133	277
from visit, . . . . .	—	1	1
from escape, . . . . .	3	—	3
Nominal admissions, . . . . .	2	10	12
Viz.: from visit, . . . . .	2	9	11
from escape, <sup>1</sup> . . . . .	—	1	1
Whole number of cases within the year, . . . . .	899	1,055	1,954
Dismissed within the year, . . . . .	89	115	204
Viz.: discharged . . . . .	9	19	28
as recovered, . . . . .	1	3	4
as capable of self-support, . . . . .	3	4	7
as improved, . . . . .	—	5	5
as not improved, . . . . .	5	7	12
as not insane, . . . . .	—	—	—
died, . . . . .	50	69	119
transferred, . . . . .	3	5	8
escaped, . . . . .	16	5	21
on visit October 1, . . . . .	11	17	28
Nominal dismissals for commitment, . . . . .	—	—	—
Patients under care Sept. 30, 1916, . . . . .	810	940	1,750
In hospital, . . . . .	810	911	1,721
In family care . . . . .	—	29	29
Viz.: regularly committed, . . . . .	18	11	29
emergency, . . . . .	—	—	—
voluntary, . . . . .	1	—	1
temporary care, . . . . .	—	—	—
transfers, . . . . .	791	929	1,720
supported as State patients, . . . . .	787	907	1,694
as reimbursing patients, . . . . .	20	30	50
as private patients, . . . . .	3	3	6
Number of different persons within the year, . . . . .	897	1,045	1,942
Number of different persons admitted, . . . . .	178	150	328
Number of different persons admitted from the community, . . . . .	31	16	47
Number of different persons dismissed, . . . . .	87	105	192
Number of different persons dismissed to the community, . . . . .	84	100	184
Number of different persons recovered, . . . . .	1	3	4
Number of different persons capable of self-support, . . . . .	3	4	7
Daily average number in hospital, . . . . .	775.28	861.56	1,636.84
Daily average number in family care, . . . . .	.75	32.39	33.14
Daily average number under care, . . . . .	776.03	893.95	1,669.98
Viz.: State patients, . . . . .	749.42	850.85	1,600.27
reimbursing patients, . . . . .	24.37	40.19	64.56
private patients, . . . . .	2.24	2.91	5.15
Whole number of emergency admissions, . . . . .	—	—	—
Whole number of voluntary admissions, . . . . .	—	—	—
Daily average number of voluntary patients, . . . . .	1	—	1
Whole number of temporary-care admissions, . . . . .	—	—	—
Daily average number of temporary-care patients, . . . . .	—	—	—

<sup>1</sup> To be included with deaths.



2. — *Family Care Department.*

	Males.	Females.	Totals.
Remaining Sept. 30, 1915, . . . . .	1	26	27
Admitted within the year, . . . . .	—	37	37
Whole number of cases within the year, . . . . .	1	63	64
Dismissed within the year, . . . . .	1	34	35
Viz.: returned to institution, . . . . .	—	31	31
discharged, . . . . .	—	1	1
escaped, . . . . .	—	2	2
on visit, . . . . .	1	—	1
Remaining Sept. 30, 1916, . . . . .	—	29	29
Supported by the State, . . . . .	—	29	29
Private, . . . . .	—	—	—
Self-supporting, . . . . .	—	—	—
Number of different persons within the year, . . . . .	1	52	53
Number of different persons admitted, . . . . .	—	29	29
Number of different persons dismissed, . . . . .	1	27	28
Daily average number, . . . . .	.75	32.39	33.14
State, . . . . .	.75	32.39	33.14
Private, . . . . .	—	—	—
Self-supporting, . . . . .	—	—	—

3. — *Insane received on First and Subsequent Commitments.*

NUMBER OF COMMITMENTS.	CASES COMMITTED.		
	Males.	Females.	Totals.
First to this hospital, . . . . .	31	16	47
Second to this hospital, . . . . .	—	—	—
Third to this hospital, . . . . .	—	—	—
Total cases, . . . . .	31	16	47
Total persons, . . . . .	31	16	47
Never before in any hospital for the insane, . . . . .	23	15	38

4. — *Nativity and Parentage of Insane Persons first admitted to Any Hospital.*

PLACES OF NATIVITY.	MALES.			FEMALES.			TOTALS.		
	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.
Massachusetts, . . . . .	13	4	2	11	4	4	24	8	6
Other New England States, . . . . .	2	2	3	-	2	2	2	4	5
Other States, . . . . .	-	-	-	-	-	-	-	-	-
Total native, . . . . .	15	6	5	11	6	6	26	12	11
Other countries: —									
Canada, . . . . .	3	4	4	1	1	2	4	5	6
England, . . . . .	1	-	-	1	1	1	2	1	1
Germany, . . . . .	1	1	1	-	-	-	1	1	1
Ireland, . . . . .	1	2	2	1	3	2	2	5	4
Italy, . . . . .	-	1	1	-	-	-	-	1	1
Russia, . . . . .	2	3	3	1	-	-	3	3	3
Total foreign, . . . . .	8	11	11	4	5	5	12	16	16
Unknown, . . . . .	-	6	7	-	4	4	-	10	11
Totals, . . . . .	23	23	23	15	15	15	38	38	38

5. — *Residence of Insane Persons admitted from the Community.*

PLACES.	FIRST ADMITTED TO ANY HOSPITAL.			ALL OTHER ADMISSIONS.			TOTALS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Barnstable County, . . . . .	-	1	1	-	-	-	-	1	1
Essex County, . . . . .	1	3	4	-	-	-	1	3	4
Hampden County, . . . . .	1	-	1	-	-	-	1	-	1
Middlesex County, . . . . .	6	4	10	2	-	2	8	4	12
Norfolk County, . . . . .	-	1	1	-	-	-	-	1	1
Plymouth County, . . . . .	-	1	1	-	-	-	-	1	1
Suffolk County, . . . . .	15	4	19	6	1	7	21	5	26
Worcester County, . . . . .	-	1	1	-	-	-	-	1	1
Totals, . . . . .	23	15	38	8	1	9	31	16	47
Unknown, . . . . .	-	-	-	-	-	-	-	-	-
Totals, . . . . .	23	15	38	8	1	9	31	16	47
Cities and towns, . . . . .	23	15	38	8	1	9	31	16	47
Country districts, . . . . .	-	-	-	-	-	-	-	-	-
Totals, . . . . .	23	15	38	8	1	9	31	16	47

6. — *Civil Condition of Insane Persons first admitted to Any Hospital.*

	Males.	Females.	Totals.
Unmarried, . . . . .	15	10	25
Married, . . . . .	7	3	10
Widowed, . . . . .	1	1	2
Divorced, . . . . .	—	1	1
Unknown, . . . . .	—	—	—
Totals, . . . . .	23	15	38

7. — *Occupation of Insane Persons first admitted to Any Hospital.*

## MALES.

Artist, . . . . . 1	Pressman and paper finisher, . . . . . 1
Baker, . . . . . 1	Teamster, . . . . . 1
Carpenter, . . . . . 1	Tile mason, . . . . . 1
Clerk, . . . . . 2	Upholsterer, . . . . . 1
Fish dealer, . . . . . 1	Window cleaner, . . . . . 1
Laborer, . . . . . 2	No occupation, . . . . . 7
Machinist, . . . . . 1	
Mule spinner, . . . . . 1	Total, . . . . . 23
Peddler, . . . . . 1	

## FEMALES.

Chambermaid, . . . . . 1	Student, . . . . . 1
Domestic, . . . . . 1	No occupation, . . . . . 7
Housekeeper, . . . . . 1	
Housewife, . . . . . 1	Total, . . . . . 15
Housework, . . . . . 3	

8. — *Ages of Insane at First Attack, Admission and Death.*

AGES.	FIRST ADMITTED TO ANY HOSPITAL.				DIED.							
	AT FIRST ATTACK.			WHEN ADMITTED.		AT FIRST ATTACK.			WHEN ADMITTED.			
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Congenital,	—	2	2	—	—	—	2	—	2	—	—	—
15 years and less,	—	4	4	—	—	—	2	3	5	—	—	—
From 15 to 20 years,	—	—	—	4	2	6	2	2	4	2	—	2
20 to 25 years,	—	2	2	3	3	6	3	2	5	2	2	4
25 to 30 years,	—	—	—	4	3	7	3	8	11	5	6	11
30 to 35 years,	—	—	—	2	—	2	—	5	5	7	5	12
35 to 40 years,	1	2	3	—	3	3	2	6	8	4	7	11
40 to 50 years,	—	—	—	4	4	8	1	5	6	8	21	29
50 to 60 years,	—	—	—	5	—	5	5	3	8	9	12	21
60 to 70 years,	—	—	—	—	—	—	2	2	4	9	11	20
70 to 80 years,	—	—	—	1	—	1	2	2	4	3	4	7
Over 80 years,	—	—	—	—	—	—	—	—	—	1	1	2
Totals,	1	10	11	23	15	38	24	38	62	50	69	119
Not insane,	—	—	—	—	—	—	—	—	—	—	—	—
Unknown,	22	5	27	—	—	—	26	31	57	—	—	—
Totals,	23	15	38	23	15	38	50	69	119	50	69	119
Mean known ages (in years),	35	15.6	17.4	35.5	31.7	34.0	35.2	35.4	35.4	46.4	47.8	47.2



10. — *Probable Duration of Mental Disease before Admission.*

PREVIOUS DURATION.	FIRST ADMITTED TO ANY HOSPITAL.		
	Males.	Females.	Totals.
Congenital, . . . . .	—	2	2
Under 1 month, . . . . .	—	—	—
From 1 month to 3 months, . . .	—	—	—
3 to 6 months, . . . . .	—	1	1
6 to 12 months, . . . . .	—	—	—
1 to 2 years, . . . . .	—	—	—
2 to 5 years, . . . . .	—	2	2
5 to 10 years, . . . . .	1	—	1
10 to 20 years, . . . . .	—	4	4
Over 20 years, . . . . .	—	1	1
Totals, . . . . .	1	10	11
Unknown, . . . . .	22	5	27
Not insane, . . . . .	—	—	—
Totals, . . . . .	23	15	38
Average known duration (in years), .	5	9	8.7



11. — Form of Mental Disease in Patients admitted from the Community, or discharged, with Condition on Discharge, or died.

FORM OF DISEASE.	COMMITTED.			DISCHARGED.										DIED.			TOTAL DISCHARGES AND DEATHS.		
	Males.	Females.	Totals.	RECOVERED.			CAPABLE OF SELF-SUPPORT.			IMPROVED.			NOT IMPROVED.			NOT INSANE.			Totals.
				Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	
A. — First admitted to any hospital: —																			
Alcoholic psychoses, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Alcoholic psychoses, chronic,	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	11
Dementia praecox,	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	5
Epileptic psychoses,	15	12	27	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	34
General paresis,	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Idiocy,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Imbecility,	5	2	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13
Manic-depressive insanity,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Psychoses with brain or nervous dis-																			
cases: —																			
Arteriosclerosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Cerebrospinal syphilis,	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Senile psychoses,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals A,	23	15	38	—	2	2	2	4	6	—	3	3	4	4	8	—	—	—	109
B. — All other admissions: —																			
Alcoholic psychoses, chronic,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Dementia praecox,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17
Epileptic psychoses,	5	1	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9
General paresis,	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Imbecility,	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Involution melancholia,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Manic-depressive insanity,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
Senile psychoses,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals B,	8	1	9	1	1	2	1	—	1	—	2	2	1	3	4	—	—	—	38
Aggregate cases,	31	16	47	1	3	4	3	4	7	—	5	5	5	7	12	—	—	—	147
Aggregate persons,	31	16	47	1	3	4	3	4	7	—	5	5	5	7	12	—	—	—	147

## 12. — Discharges of the Insane, classified by Admission and Results, and Deaths.

NUMBER OF THE ADMISSION.	RECOVERED.			CAPABLE OF SELF-SUPPORT.			IMPROVED.			NOT IMPROVED.			NOT INSANE.			DIED.			TOTAL DISCHARGES AND DEATHS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
First to this hospital, . . .	1	3	4	3	4	7	-	5	5	5	7	12	-	-	-	50	68	118	59	87	146
Second to this hospital, . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Third to this hospital, . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
Total cases, . . .	1	3	4	3	4	7	-	5	5	5	7	12	-	-	-	50	69	119	59	88	147
Total persons, . . .	1	3	4	3	4	7	-	5	5	5	7	12	-	-	-	50	69	119	59	88	147
First admitted to any hospital,	-	2	2	2	4	6	-	3	3	3	4	8	-	-	-	41	49	90	47	62	109











## 14. — Duration of Mental Disease and its Treatment in Persons recovered or died.

PERIOD.	FIRST ADMITTED TO ANY HOSPITAL.						ALL OTHER ADMISSIONS.					
	DURATION BEFORE ADMISSION.			HOSPITAL RESIDENCE.			WHOLE DURATION, FROM THE ATTACK.			WHOLE KNOWN PERIOD OF MENTAL DISEASE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
A. — Recoveries: —												
Under 1 month, . . . . .	—	1	1	—	—	—	—	—	—	—	—	—
From 1 to 3 months, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
3 to 6 months, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
6 to 12 months, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
1 to 2 years, . . . . .	—	—	—	—	1	1	—	—	1	1	—	1
2 to 5 years, . . . . .	—	—	—	—	—	—	—	1	1	—	1	1
5 to 10 years, . . . . .	—	—	—	—	1	1	1	—	—	—	—	—
10 to 20 years, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Over 20 years, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Totals, . . . . .	—	1	1	—	2	2	1	1	2	1	1	2
Unknown, . . . . .	—	1	1	—	—	—	—	1	—	—	—	—
Totals, . . . . .	—	2	2	—	2	2	—	2	2	1	1	2
Average of known cases (in months), . . . . .	—	.13	.13	—	51.3	51.3	—	84.6	84.6	14.9	57.7	35.7





FORTIETH ANNUAL REPORT

OF THE

GRAFTON STATE HOSPITAL

AT

NORTH GRAFTON AND WORCESTER,

FOR THE

YEAR ENDING NOVEMBER 30, 1917.



BOSTON:

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
32 DERNE STREET.

1918.



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PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

MAILED 11/17/12  
TO  
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# The Commonwealth of Massachusetts.

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## TRUSTEES' REPORT.

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*To His Excellency the Governor and the Honorable Council.*

The trustees of the Grafton State Hospital respectfully submit the following report of the affairs of the hospital for the fiscal year ending Nov. 30, 1917.

The vacancy created in the Board of Trustees by the expiration of the term of Mr. Roger W. Cutler of Dover was filled by his reappointment in February.

It affords us considerable pleasure to report that all of the ten buildings, which were unoccupied at the Grafton Department when this Board assumed charge of the institution, are now fully occupied and used.

Chapter 123 of the Resolves of 1917 made the following appropriations for this hospital:—

For the installation of refrigerating apparatus in the storehouse	
at Grafton, . . . . .	\$9,000
For fire protection and fire escapes, . . . . .	6,375
For laundry machinery, . . . . .	3,500
For remodeling the heating plant in the Summer Street building,	89,303

The contract for the remodeling of the heating plant at the Worcester Department has been awarded by the Commission on Mental Diseases in Boston, and the work is now well under way.

The material for the installation of new stairways has also been purchased by the Commission, and this work will be undertaken in a short time by the hospital employees, there not being sufficient money in the appropriation to pay for the necessary labor at present prices.

Contracts have also been awarded for insulating the refrigerating rooms at the storehouse of the Grafton Department, and the work is well under way.



The laundry machinery, allowed by the Legislature, has already been purchased, and the capacity of the laundry at the Grafton Department will be nearly doubled.

An act to authorize the Commission on Mental Diseases to acquire an additional water supply for the Grafton State Hospital, under chapter 313 of the General Acts of 1917, was approved May 25, 1917. By this act the source of supply is limited to the town of Grafton; and although an engineer representing the Commission on Mental Diseases has made a careful investigation of the possible sources of water supply for the hospital, the problem of obtaining water has not as yet been satisfactorily solved. The Board is of the opinion that a satisfactory water supply cannot be obtained within the borders of Grafton, and would strongly urge that an amendment to the above act be made which would enable the Commission to obtain water from the metropolitan supply, Hockomocko Pond, or from some other source. This is a matter which should receive immediate attention, as it has been very difficult at times during the last few months to obtain sufficient water for the needs of the institution. It has often been necessary to restrict bathing facilities of the patients. This situation would have been very serious had there been a fire, as it would have been impossible to have used water for fire protection without using practically all the water available for drinking purposes.

House Bill No. 1059, introduced by Representative Arthur W. Frail, failed of passage at the last session of the Legislature. This bill provided for the construction of a State highway between Westborough and North Grafton, — about  $2\frac{1}{2}$  miles of new road. This would complete a direct route from Boston to Worcester by way of Framingham and Westborough. Many of the supplies of the hospital have to be hauled over this road from Worcester to the Grafton Department daily. As the Grafton Department provides for over 1,400 patients and has nearly 300 employees, the importance of facilitating delivery of supplies at this place is readily apparent. It would certainly be advantageous to the Commonwealth to render this site more available, owing to the necessity of developing the property. We would respectfully request that an appropriation for this road be made by the Legislature this winter.

We would also invite attention to the need of further apparatus for fire protection as outlined in the report of the superintendent. This is a matter which has been reported upon at various times by the District Police and should, in our opinion, receive early consideration.

We feel that special attention should be called to the necessity of constructing a coal trestle at the Grafton Department. The present railway spur is only temporary in character, and requires frequent repairs to make the delivery of coal possible. We feel that this is a condition which should be remedied as soon as possible.

The boiler blowers and grates, referred to in the superintendent's report, should be allowed if the buildings at Grafton are to be properly heated during the winter.

In conclusion, we wish to emphasize again the necessity of an increase in the wage schedule. It has been found impossible to obtain a sufficient number of employees to properly care for the patients in the hospital at the wages now paid. We are also of the opinion that whatever schedule is adopted should be uniformly used in all hospitals for the insane. At the present time employees in one hospital take advantage of the better pay offered at some other institution, a condition of affairs which should not be tolerated, and which is detrimental to the best interests of the Commonwealth.

We regret the necessity of asking for an increase in the amount of money appropriated for the maintenance of the hospital. The expenditures for the year just ended amounted to \$524,888.40, representing a weekly per capita cost of \$5.394. We will, of course, have to provide for a larger population during the coming year, and will need an appropriation which will make it possible for us to meet the increased cost of all commodities. In view of existing conditions, we feel that the amount asked for the coming year represents a very conservative estimate of our needs.

Respectfully submitted,

MARGARET A. CASHMAN,

*Secretary of Trustees.*

## SUPERINTENDENT'S REPORT.

---

*To the Trustees of the Grafton State Hospital.*

In accordance with the provisions of the statutes, I am submitting for your consideration the fortieth annual report of the superintendent of the Grafton State Hospital, for the statistical year ending Sept. 30, 1917, and the fiscal year ending Nov. 30, 1917.

### MOVEMENT OF POPULATION.

The census of the hospital on Sept. 30, 1916, was 1,799, — 837 men and 962 women. Of this number, 810 men and 911 women, a total of 1,721, were in the hospital. Twenty-nine women were in family care, 28 out on visit, and 21 on escape. Four hundred and seventy-four patients were admitted during the year. Of these, 284 were men and 190 women. Seventy-nine of this number, including 54 men and 25 women, were committed directly to the care of the hospital. Three hundred and ninety-five, including 230 men and 165 women, were received by transfer from other institutions. Seven voluntary cases, including 5 men and 2 women, were admitted during the year. The whole number of cases treated during the year was 2,273, — 1,121 men and 1,152 women. Two hundred and eighty-six cases, including 163 men and 123 women, were dismissed during the year. Of this number, 72 were discharged, 2 as recovered, 18 as capable of self-support, 27 as improved, and 24 as not improved. One hundred and seven men and 89 women, a total of 196, died during the year, and 13 men and 4 women, a total of 17, were transferred to other institutions.

The average daily population of the hospital for the year ending Sept. 30, 1917, was 1,812.50. The average daily number in family care was 22.91. The average daily number under

care was 1,835.41. The average daily number of private patients was 6.87.

The census on Sept. 30, 1917, was 1,987, — 958 men and 1,029 women. Of this number, 919 men and 1,001 women, a total of 1,920, were in the hospital. Eighteen women were in family care. There were 8 private patients, all the others being State charges.

The psychoses represented by the first admissions during the year were as follows: —

PSYCHOSES.	Men.	Women.	Total.
Senile, . . . . .	—	1	1
General paralysis, . . . . .	2	—	2
Psychoses with tabes, . . . . .	1	—	1
Epileptic psychoses, . . . . .	7	6	13
Mental deficiency without psychoses, . . . . .	13	5	18
Epilepsy without psychoses, . . . . .	1	—	1
Total, . . . . .	24	12	36

The psychoses represented by all commitments were as follows: —

PSYCHOSES.	Men.	Women.	Total.
Senile, . . . . .	—	1	1
With cerebral arteriosclerosis, . . . . .	1	—	1
General paralysis, . . . . .	14	4	18
With cerebral syphilis, . . . . .	1	—	1
With tabes, . . . . .	2	—	2
Alcoholic, . . . . .	2	—	2
With delirium of unknown origin, . . . . .	1	—	1
With constitutional psychopathic inferiority, . . . . .	1	—	1
Epileptic, . . . . .	16	15	31
Undiagnosed, . . . . .	1	—	1
Mental deficiency without psychoses, . . . . .	13	5	18
Epilepsy without psychoses, . . . . .	2	—	2
Total, . . . . .	54	25	79

The psychoses represented by the cases discharged were as follows:—

PSYCHOSES.	Men.	Women.	Total.
Senile, . . . . .	—	1	1
With cerebral arteriosclerosis, . . . . .	1	—	1
General paralysis, . . . . .	3	—	3
With cerebral syphilis, . . . . .	2	1	3
Alcoholic, . . . . .	8	1	9
Manic-depressive, . . . . .	—	2	2
Dementia præcox, . . . . .	11	1	12
With constitutional psychopathic inferiority, . . . . .	1	—	1
Epileptic, . . . . .	5	1	6
Undiagnosed, . . . . .	1	1	2
Mental deficiency without psychoses, . . . . .	7	10	17
Epilepsy without psychoses, . . . . .	—	2	2
Total, . . . . .	39	20	59

The psychoses represented by the deaths occurring during the year were as follows:—

PSYCHOSES.	Men.	Women.	Total.
Traumatic, . . . . .	—	1	1
Senile, . . . . .	4	8	12
With cerebral arteriosclerosis, . . . . .	2	—	2
General paralysis, . . . . .	14	4	18
With tabes, . . . . .	1	—	1
Alcoholic, . . . . .	7	7	14
Due to drugs and exogenous toxins, . . . . .	—	1	1
With delirium of unknown origin, . . . . .	1	—	1
Manic-depressive, . . . . .	2	8	10
Dementia præcox, . . . . .	29	32	61
Paranoia and paranoic conditions, . . . . .	1	—	1
With mental deficiency, . . . . .	1	4	5
With constitutional psychopathic inferiority, . . . . .	1	—	1
Epileptic, . . . . .	40	17	57
Mental deficiency without psychoses, . . . . .	4	7	11
Epilepsy without psychoses, . . . . .	—	1	1
Total, . . . . .	107	90	197



## GENERAL HEALTH OF THE HOSPITAL.

The general health of the hospital population was very good during the year, aside from a mild epidemic of enteritis occurring during the summer months, at both the Grafton and Worcester departments. A man, eighty-four years of age, at the Worcester Department, sustained a fracture of the right femur as the result of an accidental fall. A female patient in the Grafton Department was operated on in December for appendicitis. A patient at the Worcester Department was assaulted by an attendant on June 3, and sustained two fractured ribs as the result of the assault. The attendant was at once arrested, tried the following day, and sentenced to sixty days in the House of Correction. A female patient was operated on at the Worcester Department on March 27 for tubercular peritonitis, and made a good recovery. A female patient was operated on for appendicitis at the Grafton Department on March 10. A woman at the Grafton Department sustained a dislocation of the right arm as the result of a fall. There were several operations for strangulated hernia, all with good recoveries. A nurse at the Grafton Department was operated on for appendicitis in the month of July. A man was assaulted by another patient at the Elms A building, in Grafton, on August 14, and died afterwards as the result of his injuries. The assault was one which could not have been anticipated or prevented, and was witnessed by an attendant and reported to the medical examiner of the district and to the Commission on Mental Diseases. It occurred as the result of a sudden impulse on the part of a patient who had not committed any dangerous assaults previously. The matter was investigated thoroughly by Judge Fowler, and by the Commission. These investigations showed that the occurrence was not due to any neglect on the part of the employees of the institution. A male attendant at the Grafton Department was operated on for appendicitis during the month of September. A patient from the Grafton Department was run over and killed by a train near his home, in Walpole, on September 18. A nurse at the Worcester Department was sent to the isolation hospital in October for diphtheria, and one nurse



died at the Grafton Department from typhoid fever. A female patient at the Grafton Department who had shown no evidences of suicidal tendencies, and who had enjoyed a parole of the grounds for several years, committed suicide as the result apparently of a sudden impulse, by throwing herself into the reservoir on November 9. The total number of deaths for the year was 197. The number of autopsies performed at the hospital for the year was 112, constituting 54.64 per cent. of the total number of deaths.

#### EMPLOYEES.

There has been a large number of changes in the personnel of the nurses and attendants employed in the hospital during the year. There were 349 persons employed in the institution on Nov. 30, 1916, and 390 on Nov. 30, 1917. Nine hundred and twenty-six entered the service during the year. There were 472 resignations and 413 discharges. The rotation of the employees for the year was 3.16, representing a percentage of 1,255 persons having occupied 404 positions. The usual difficulty has been encountered during the year in obtaining satisfactory employees for the hospital. This is due, to a certain extent, to the more or less unpleasant nature of the work itself, but primarily to the inadequate wages paid. It has been especially difficult to maintain a sufficient force of employees at the Grafton Department on account of its remoteness from the city. The necessity of an increased wage schedule is greater than ever before. It is equally important that all the hospitals should operate under a uniform schedule, employees frequently going from one hospital to another to take advantage of a higher rate of wages. A new schedule would, of course, be useless unless the appropriations, as made by the Legislature, are sufficiently large to cover the needs of the institution. For this reason it might be desirable to make a uniform wage schedule statutory.

#### THE MEDICAL SERVICE OF THE HOSPITAL.

There have been several changes in the medical staff during the year. Dr. A. E. Pattrell was promoted to the position of first assistant physician at the Grafton Department on July 1.

Dr. H. Wilbur Smith of Groton was appointed assistant physician on Dec. 23, 1916, and assigned to the male service at Grafton. Dr. Richard H. Price of Boston was appointed to the position of assistant physician on Aug. 8, 1917, and has been on duty at the Grafton Department. Dr. Michael J. O'Meara of Worcester was appointed assistant physician on Oct. 9, 1917, and assigned to the Worcester Department. Staff meetings have been held daily during the week on Mondays, Wednesdays and Fridays at the Grafton Department, and on Tuesdays, Thursdays and Saturdays at the Worcester Department. A fairly well-equipped operating room was installed during the year in the Pines B building at Grafton, and a sterilizing equipment has been added to the operating room at Worcester. Attention is again called to the necessity of obtaining additional appropriations for the purpose of installing hydrotherapeutic equipments at both the Grafton and Worcester departments, as well as for the installation of continuous baths. The pathological work of the hospital has been done by Dr. D. A. Thom, assistant pathologist to the Commission on Mental Diseases. Under his direction, special treatments have been given for neurosyphilis, with special attention to general paresis. To facilitate this work the Commission has arranged to have such cases committed directly to the Worcester Department. Dr. Thom resigned during the month of August to enter the Medical Reserve Corps of the United States Army. This work will be continued by Dr. Hiram L. Horsman, the first assistant at the Worcester Department, and Dr. Ada F. Harris. The pathological work will be done by Dr. Myrtelle M. Canavan, assistant pathologist to the Commission on Mental Diseases.

Sixty-two cases of general paresis and 5 cases of cerebro-spinal syphilis were admitted during the year. Forty-one cases were given the intravenous salvarsan treatment, and 12 cases the intraventricular treatment. This method of treating neurosyphilis was used for the first time in Massachusetts in this hospital during the present year. There have been 15 operations for this purpose. The results have been quite gratifying, and are unquestionably sufficient to warrant further treatments. The following is a summary of the special treatments for neurosyphilis: —

Forty-one patients suffering with general paresis received intravenous injections of diarsenol; number of injections, 602.

Fifteen received from one to ten intravenous treatments each; total average amount each received, 2.7 grams diarsenol. These were advanced cases, and but three have shown improvement; two clinical, one clinical and serological.

Nine received from eleven to twenty intravenous treatments each; total average amount each received, 7.1 grams diarsenol. Four have shown improvement, three continuing treatment, two no improvement. Three have shown marked clinical improvement; one clinical and serological.

Five received from twenty-one to thirty intravenous treatments; total average amount each received, 11.6 grams diarsenol. Five have shown clinical improvement; two clinical and serological.

Five received from thirty-one to thirty-six intravenous treatments; average amount each received, 15.0 grams diarsenol. Three have shown clinical, one clinical and serological improvement; two temporary clinical improvement.

Seven patients have received, in addition to intravenous treatments, intraventricular and subdural injections of diarsenolized serum, reinforced with 3 to 5 milligrams diarsenol, or intraspinous injections of diarsenolized serum.

Four received from one to ten intravenous treatments; total average amount, 3.0 grams diarsenol, with seven intraventricular, sixteen subdural and one intraspinous treatments. Three have shown clinical improvement, one marked clinical and serological.

Two received from eleven to twenty intravenous treatments; total average amount 7.6 grams diarsenol, with four intraventricular, six subdural and one intraspinous treatments. One has shown marked clinical improvement, one no change.

One received twenty intravenous treatments; total amount, 11.3 grams diarsenol; thirteen intraspinous treatments, with both clinical and serological improvement.

Five advanced cases have been treated by intraventricular and subdural methods without intravenous treatments. No improvements noted.

Two cases of tabo-paresis have been given five intraspinous injections without intravenous treatment, with no improvement noted.

Eleven cases of cerebrospinal syphilis have been treated intravenously.

Six received from one to ten treatments; total average amount each received, 2.8 grams diarsenol; one received one intraspinous treatment. One has shown both clinical and serological improvement, three have

shown clinical without serological improvement, one has shown serological without clinical improvement, one no change.

Four received from eleven to twenty treatments; total average amount each received, 5.7 grams diarsenol. One has shown both clinical and serological improvement. Three have shown serological without clinical improvement.

One received twenty-seven treatments; total amount, 13.7 grams diarsenol, and has shown both clinical and serological improvement.

Three cases of tabes have been treated intravenously and intraspinally.

Two received from one to ten intravenous treatments; total average amount each received, 2.8 grams diarsenol, with four intraspinal treatments. Two have shown temporary clinical improvement.

One received sixteen intravenous treatments; total amount, 8.7 grams diarsenol, and six intraspinal treatments with no improvement.

Two cases with secondary lesions of syphilis have been treated with clinical improvement in both.

Total number of paretics treated, . . . . .	48
Total number of cerebrospinal syphilitics treated, . . . . .	11
Total number of tabes treated, . . . . .	3
Total number of secondary lesions of syphilis treated, . . . . .	2
Total number of intravenous treatments, . . . . .	763
Total number of intraventricular treatments, . . . . .	19
Total number of subdural treatments, . . . . .	37
Total number of intraspinal treatments, . . . . .	38

Dental rooms have been opened at both the Grafton and the Worcester departments, and dentists are now making regular weekly visits at both places.

An intensive study of epileptic psychoses has been made at the Grafton Department during the summer. This will be made the subject of a special report at a later date.

The industrial and social service work of the institution has been carried on as usual. The industrial departments were removed from the wards at Worcester, and installed in the building formerly used as a carpenter shop. All of the industries formerly housed in the Elms D building at Grafton were removed to the basement of the Elms A building, and



industrial work has been carried on there on a much larger scale than was possible heretofore.

The work of the training school for nurses has been continued very successfully during the year under the direction of the superintendent of nurses, Miss P. Jean Porteous. The junior class at Grafton consists of 18 members, the intermediate class of 6, and the senior class of 6. At the Worcester Department there are 5 in the junior class, 4 in the intermediate, and 1 in the senior class. The course of study outlined by the Commission on Mental Diseases is being followed at both departments.

It is obvious at this time that the entire facilities of the hospital cannot be adequately utilized by the transfer of patients from other institutions. The present capacity of the hospital is represented by a minimum of 2,035 beds. The average daily population for the last statistical year was 1,812.50. Notwithstanding the fact that there were 395 patients transferred from other institutions, the wards have not been filled at any one time during the year. The number of deaths and discharges in an institution of this size is so great that the vacancies cannot be filled by transfers from other hospitals. I would therefore suggest that arrangements be made to send more commitments to Grafton from either the Worcester or Boston districts. Owing to the remoteness of the hospital from the metropolitan center, it would seem more desirable to have cases committed from Worcester. With the remodeling of the heating plant at the Worcester Department and the completion of the new stairways, the Summer Street building will be an ideal place for the reception and distribution of such patients as may be committed to the custody of this institution from the Worcester district under the direction of the Commission on Mental Diseases.

#### IMPROVEMENTS DURING THE YEAR.

##### *Grafton Department.*

All of the buildings at Grafton have been occupied, and are now in permanent use. The Oaks Service building was opened on May 2, 1917, the Elms B building on Feb. 12, 1917, and the

Elms Service building on Feb. 14, 1917. The grading and road building in front of the administration building have been completed. Grading and road building have been continued at the Oaks group, and the service road to the Elms group will be finished soon. The steam line connecting the Elms group with the main power house has been finished, and is now in operation. The two boilers formerly located at the Elms group have been removed to the main boiler house, and the concrete chimney under process of construction during the preceding year has been finished, and is now in use. The room in the laundry and power house building formerly used as a carpenter shop has been remodeled and made into an excellent bakery. All the bread is now baked at Grafton, instead of being delivered daily from the Worcester Department, as was done formerly. Additional room has been provided at the laundry of the Grafton Department, and new machinery is being installed at the present time. This will practically double the capacity of the laundry. The refrigerator at the Willows service building was remodeled during the year, and new insulation installed. The large stock of lumber which was formerly stored in the basement of the building at Summer Street was removed during the year to the new carpenter shop at Grafton. The work on the Willows farmhouse is rapidly nearing completion. It will be finished during the coming winter.

The training school was provided with a lecture room in the Pines B building during the year.

The storehouse at Grafton has been connected with the sewerage system. Contracts have been awarded for the installation of a refrigerating plant at the storehouse in Grafton, which will furnish facilities for taking care of meat, butter, eggs, etc., at that place. This will do away with the necessity of hauling such supplies from Worcester. A mending room has been installed in the Pines B building, and the room formerly used for that purpose at the laundry building is now used as a sorting room. After the removal of the boilers from the Elms power plant, the chimney at that place was taken down by a Worcester firm. The bricks from this chimney, together with other materials on hand, were used in the erec-



tion of a considerable addition to the laundry building at Grafton. This will be used as a receiving room, and will ultimately furnish additional space for washing machines.

The industrial department at the Oaks group, formerly housed in the farmhouse, has been removed to the lower floor of the Oaks A building, previously used as a kitchen.

The women's infirmary ward has been removed from the Pines C building to the Pines A building. The employees' cottage was painted during the summer, and extensive repairs were made to the cow barn. A cinder walk running from the officers' cottage to the employees' cottage was built during the year. The lower floor of the Oaks D building is now being used as an infirmary ward, and the upper floor has been devoted to the care of tubercular patients. All male patients suffering from tuberculosis are now transferred to this ward.

New window guards were installed at the Oaks D building.

During the summer the henhouses at the Oaks group were removed from the immediate vicinity of the wards and located in the adjoining woods.

The tailor shop was removed from the upper floor of the Elms A building to the basement. The shoe shop was also removed from the basement of the Elms cottage to the industrial rooms in the Elms A building.

A time recorder was placed in operation in the office of the Oaks group during the year.

A moving-picture machine was installed in the Pines C building, and entertainments are held weekly for the benefit of the patients.

A Roman Catholic chaplain has been appointed for the Grafton Department, and masses are now held weekly instead of on alternate Sundays as heretofore.

The old wooden building formerly used as a blacksmith shop at the Grafton Department was removed during the summer.

Several of the rooms on the third floor of the laundry building at Grafton have been finished, and are now occupied by employees.

Bread cutters and butter cutters have been installed in the various kitchens at both departments, and have resulted in a material saving.

Galvanized iron shelving has replaced the old wooden shelves in the refrigerators during the year. An automatic refrigerating machine was installed in the Oaks service building. This machinery furnishes refrigeration for the kitchen, and produces 500 pounds of artificial ice on alternate days.

The dining-room tables at the Oaks and Elms service buildings were refinished recently, and are greatly improved in appearance.

Owing to a break in the sewer line beneath the floor of the Elms A building, a new sewer at that place was necessary.

The space available for the burial of bodies in the hospital lot at Hope Cemetery, Worcester, was exhausted sometime ago, and it has been necessary to find a new place for the burial of the dead. After a careful consideration of the subject, it was deemed desirable by the trustees to establish a cemetery on the hospital grounds, and a site was selected for this purpose on a plot of ground north of the Willows group at Grafton. This lot is bounded on the north by Cherry Street, on the east by Green Street, on the south by Branch Street, and on the west by a hospital road connecting Cherry with Branch Street. Permission to use this lot for cemetery purposes was granted by the board of health of Shrewsbury. The plot will provide accommodations for over 3,000 bodies.

#### *Worcester Department.*

The renovation of bathrooms has been continued during the year. Linoleum has been installed in a number of the wards and a sufficient amount purchased to provide for all of the wards in the Worcester Department. The heating plant at the greenhouse was remodeled during the year. A number of the wards have been repainted, and the repainting of the entire building will be completed soon. New cork insulation has been installed in the refrigerators adjoining the main kitchen, and the old meat refrigerator will be used for scullery purposes. The wash room in the laundry at Summer Street was remodeled during the year, and new machinery installed. All of the straw and cedar mattresses have been replaced by hair mattresses. The training school has been provided with a very satisfactory lecture room, which was formerly used for

office purposes. New window guards have been purchased for ward 17. Time recorders were installed in the office, and the employees' dining-rooms have been removed from the wards and more adequate facilities provided for that purpose elsewhere.

A bronze tablet was installed in the main hallway near the medical office in the Worcester Department, in recognition of the generosity of Martha Johonnot, Abigail Wheeler, Nathaniel MacCarthy, Ziba Storrs and Enoch Flagg, whose liberal contributions from 1833 to 1862 added materially to the comfort and welfare of the patients who have occupied the building on Summer Street.

Contracts have been awarded by the Commission on Mental Diseases for the erection of a new boiler house at the Worcester Department, as well as for the installation of a new heating system throughout the entire building. Material has been purchased by the Commission for the installation of new fireproof stairways to replace the old wooden ones now in use. The work necessary will be done entirely by hospital employees. The new heating plant and the fireproof stairways will render the building at the Worcester Department highly satisfactory for the care of the insane in every way.

#### NEEDS OF THE HOSPITAL FOR THE COMING YEAR.

##### *Special Appropriations.*

1. *Chapel and Assembly Hall, Grafton, \$130,000.* — The only place available for religious services at the present time, at the Grafton Department, is in the basement of one of the buildings occupied by women patients. This is not a suitable location, although Protestant, Catholic and Jewish services have been held regularly. There is no place available for the entertainment of the patients at the Grafton Department, except a day hall in one of the ward buildings. It is urgently recommended that a building for these various purposes be erected at the earliest possible moment. In view of the fact that the Grafton Department provides for over 1,400 patients and nearly 300 employees, the necessity for such a building should be readily apparent. It will not be possible to erect a

suitable hall of sufficient size, at the present prices, for less than \$130,000.

2. *Coal Trestle and Track Scales, Grafton, \$10,000.* — All of the coal now used in the main power plant at the Grafton Department is conveyed to the boiler house by means of a short switch from the Boston & Albany tracks. This switch was laid on a low dirt embankment without any supports, being intended only for temporary use, and should be replaced by a trestle as soon as possible. The present tracks frequently settle and this makes numerous repairs necessary. A trestle would furnish the department with a permanent means of delivering coal at the power plant, and would greatly facilitate the handling of coal at the boiler room. The amount requested would also furnish provision for the installation of track scales. As there is no means at present of weighing the coal received at the power house, the installation of scales would be highly desirable. This would enable us to check up the weight of the coal received with the railroad and mine weights of the fuel purchased.

3. *Sewage Connections for the Power House, Carpenter Shop and Storehouse at Grafton, \$2,300.* — The power house, carpenter shop and storehouse buildings are located at such a level that the sewage from these buildings cannot be emptied into the main sewer line without the installation of a pumping plant. The State Department of Health has authorized us to empty the sewage from these buildings temporarily into the filter bed located in the Assabet valley. This is a condition of affairs which should be remedied in the very near future, as the State Department of Health objects to the permanent disposal of sewage in this way.

4. *Fire Protection, \$12,745.* — The inspectors of the District Police have on frequent occasions called attention to the need of adequate fire protection for both the Grafton and Worcester departments. The only fire escape on the building at Worcester, which houses 550 patients, is one on the central part of the building, occupied by the administrative departments, and does not extend to the ground. The inspectors have also recommended the completion of the fire escapes on the laundry building at Worcester. There are no fire escapes on the Elms



nurses' home or on the Pines nurses' home at Grafton, both three-story buildings being occupied by numerous employees. There are no fire escapes on the building at Grafton used as a laundry, bakery and power house. There are employees living on the third floor of this building. No standpipes were ever installed in Pines A, Pines C or Elms A buildings. These are all occupied by a large number of patients, and are not properly protected from the danger of fire. Additional standpipes and hose racks should be installed in the building at Worcester, if this building is to be rendered entirely safe. The Commissioner of Public Records has called attention to the need of a fireproof record room at the Worcester Department, and to the necessity of installing a cement floor and metal furniture in the record room at Grafton. A combination chemical and hose wagon is badly needed at the Grafton Department. The loss by fire of the barn at the Oaks group, a year ago, called attention to the inadequate fire protection now available at the Grafton Department. Owing to the hilly nature of the ground and the condition of the roads at the present time, it would be impossible to use a fire engine. Under the circumstances, I would suggest the purchase of a combination chemical and hose wagon, which would cost not to exceed \$3,500. In view of the fact that the buildings at Grafton now represent an investment of approximately \$1,000,000, this would represent a very modest expenditure for fire protection. The total amount asked for would, I think, be sufficient to cover the needs of the institution as far as fire protection is concerned for many years.

5. *Hydrotherapeutic Equipment, \$6,000.* — Your attention is again called to the fact that this institution, the largest one for the insane in the State, has, with the exception of one tub for continuous baths, no hydrotherapeutic apparatus. The equipment of a modern hospital for the care of the insane is certainly not complete without a modern hydrotherapy room and tubs for prolonged baths. The amount requested would enable us to install the necessary equipment in both the Grafton and Worcester departments.

6. *Boiler, Blowers and Grates for the Power Plant, Grafton, \$8,000.* — The boiler capacity at the power house at the Graf-

ton Department is inadequate to meet the needs of the institution. It is difficult at the present time to discontinue the use of any of the boilers for the purpose of cleaning the tubes, etc. An additional boiler is absolutely necessary for the purpose of keeping the institution properly heated. Blowers and grates will also be required. Blowers and grates are necessary for the two old boilers which were removed from the Elms boiler house to the power plant.

7. *Laundry Machinery*, \$3,700. — The equipment of the laundry at Grafton is now practically complete with the exception of a flat-work ironer. The old mangle which has been in use for many years is nearly worn out, needing frequent repairing, and should be replaced as soon as possible.

8. *Window Guards*, \$2,800. — New window guards should be purchased for practically all the buildings in the hospital, as the old window guards are entirely unsatisfactory and do not prevent the escape of patients. This is too large an undertaking for any one year, and I would recommend the partial replacement of these guards annually. For this purpose an appropriation of \$2,800 is requested.

9. *New Barns for Cows and Horses*, \$35,000. — The barns used at the present time for horses and cattle are located in the immediate vicinity of the administration building, an arrangement which is for many reasons entirely unsatisfactory. During the past summer it was necessary to install new floors in the cow barn to prevent serious injury to the cattle. The barns are in a very bad state of repair, and should be replaced during the coming year. The amount asked for will furnish accommodations for 24 horses and 100 cows. A new piggery is also badly needed. Owing to the difficulty in getting sufficient funds for such a purpose, it may be desirable to defer the erection of a piggery until some future date.

#### *Maintenance.*

The appropriation necessary for the maintenance of the hospital for the coming year will be \$650,810, which is \$125,-379.08 more than the amount expended during the current year. This increase is due to various factors. The average daily population of the hospital during the year ending Novem-

ber 30 was 1,871.05. The population during the coming year will be well over 2,000 patients. It is hardly necessary to call attention to the increase in the cost of food supplies. The increase in the cost of fuel alone, as nearly as can be estimated at this time, will be \$33,000. The increase in the amount requested for salaries and wages is made necessary by the additional employees, and by the fact that higher wages must be paid if the work of the institution is to be carried on properly. The cost of the increase in the wage schedule will be approximately \$33,000, if the wages are to equal those paid in other hospitals. The per capita cost of maintenance during the year ending Nov. 30, 1916, was \$4.58 per week, or \$238.32 per year. The per capita cost for the year just ended was \$5.39 per week, or \$280.52 per year. The cost of maintenance for next year, if the amount requested is granted, will be approximately \$6.33 per week, a very reasonable increase, when the cost of all commodities is taken into consideration.

The appropriation for the present year would not have been sufficient if the hospital had maintained a full force of employees. As this institution has not been fully equipped or furnished, I am of the opinion that the amounts requested are the result of a very considerate estimate of the needs of the hospital.

Respectfully submitted,

JAMES V. MAY,  
*Superintendent.*



## TREASURER'S REPORT.

*To the Trustees of the Grafton State Hospital.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1917: —

CASH ACCOUNT.			
Balance Dec. 1, 1916,	.	.	\$10,149 92
<i>Receipts.</i>			
<i>Institution Receipts.</i>			
Board of inmates: —			
Private,	.	\$2,085 29	
Reimbursements, insane,	.	10,777 78	
		<hr/>	\$12,863 07
Sales: —			
Travel, transportation and office expenses,	.	\$65 70	
Clothing and materials,	.	462 62	
Furnishings and household supplies,	.	126 87	
Medical and general care,	.	137 52	
Farm and stable: —			
Cows and calves,	\$303 00		
Hides,	45 14		
Use of teams,	12 00		
Sundries,	2 70		
		<hr/>	362 84
Repairs, ordinary,	.	188 13	
		<hr/>	1,343 68
Miscellaneous receipts: —			
Interest on bank balances,	.	\$297 41	
Sundries,	.	147 81	
		<hr/>	445 22
		<hr/>	14,651 97
Sales, account of industries fund,	.	.	244 86
<i>Receipts from Treasury of Commonwealth.</i>			
Maintenance appropriations: —			
Balance of 1916,	.	\$18,914 95	
Advance money (amount on hand November 30),		40,000 00	
Approved schedules of 1917,	\$477,604 05		
Less returned,	86 38		
		<hr/>	477,517 67
		<hr/>	536,432 62
Special appropriations,	.	.	1,424 14
Industries fund,	.	.	28 79
			<hr/>
Total,	.	.	\$562,932 30

*Payments.*

## To treasury of Commonwealth: —

Institution receipts, . . . . .	\$14,651 97
Industries fund, . . . . .	244 86

## Maintenance appropriations: —

Balance November schedule, 1916, . . . . .	\$29,331 87
Eleven months' schedules, 1917, . . . . .	477,517 67
November advances, . . . . .	22,492 07
	<hr/>
	529,341 61

## Special appropriations: —

Approved schedules, . . . . .	\$1,424 14
Less advances, last year's report, . . . . .	267 00
	<hr/>
	1,157 14

## Industries fund: —

Approved schedules, . . . . .	28 79
Balance Nov. 30, 1917: —	
In bank, . . . . .	\$14,817 80
In office, . . . . .	2,690 13
	<hr/>
	17,507 93

Total, . . . . .	\$562,932 30
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## MAINTENANCE.

Appropriation, current year, . . . . .	\$524,200 00
Balance from previous year, brought forward, . . . . .	1,230 92

Total, . . . . .	\$525,430 92
Expenses (as analyzed below), . . . . .	524,888 40

Balance reverting to treasury of Commonwealth, . . . . .	\$542 52
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## ANALYSIS OF EXPENSES.

## Salaries, wages: —

James V. May, M.D., superintendent, . . . . .	\$3,713 71
General administration, . . . . .	52,499 77
Medical service, . . . . .	11,934 20
Ward service (male), . . . . .	28,521 74
Ward service (female), . . . . .	30,600 69
Repairs, . . . . .	20,719 40
Farm and stable, . . . . .	21,989 01
Grounds, . . . . .	1,998 92
	<hr/>
	\$171,977 44

## Religious instruction: —

Catholic, . . . . .	\$956 00
Jewish, . . . . .	300 00
Protestant, . . . . .	789 50
	<hr/>
	2,045 50

## Travel, transportation and office expenses: —

Advertising, . . . . .	\$117 10
Automobiles, . . . . .	2,760 00
Automobile repairs and supplies, . . . . .	4,942 34
Postage, . . . . .	679 34
	<hr/>

Amounts carried forward, . . . . .	\$8,498 78	\$174,022 94
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*Amounts brought forward,* . . . . \$8,498 78 \$174,022 94

Travel, transportation and office expenses — *Con.*

Printing and binding, . . . . .	634 63
Printing annual report, . . . . .	179 80
Stationery and office supplies, . . . . .	1,089 11
Telephone and telegraph, . . . . .	1,531 72
Travel, . . . . .	1,505 06
Sundries, . . . . .	6 70
Freight, . . . . .	40 25

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13,486 05

Food: —

Butter, . . . . .	\$8,074 68
Butterine, . . . . .	6,594 06
Beans, . . . . .	2,619 19
Crackers, etc., . . . . .	795 93
Canned soups, . . . . .	12 24
Cereals, rice, meal, etc., . . . . .	4,259 06
Cheese, . . . . .	1,169 04
Eggs, . . . . .	3,892 96
Flour, . . . . .	33,399 68
Fish (fresh, cured and canned), . . . . .	4,410 37
Fruit (fresh), . . . . .	950 16
Fruit (dried and preserved), . . . . .	4,752 89
Lard and substitutes, . . . . .	1,824 96
Macaroni and spaghetti, . . . . .	509 65
Meats, . . . . .	35,295 63
Milk (fresh and substitutes), . . . . .	8,959 45
Molasses and syrups, . . . . .	1,199 03
Potatoes, . . . . .	9,758 17
Seasonings and condiments, . . . . .	1,234 78
Sugar, . . . . .	5,756 10
Tea, coffee, cocoa, etc., . . . . .	4,147 53
Vegetables (fresh), . . . . .	2,224 29
Vegetables (canned and dried), . . . . .	1,200 67
Yeast, baking powder, etc., . . . . .	359 77
Sundries, . . . . .	27 65
Freight, . . . . .	847 19

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144,275 13

Clothing and materials: —

Boots, shoes and rubbers, . . . . .	\$3,942 11
Clothing (outer), . . . . .	8,228 99
Clothing (under), . . . . .	1,352 97
Dry goods for clothing, . . . . .	2,784 47
Hats and caps, . . . . .	203 73
Leather and shoe findings, . . . . .	451 49
Machinery for manufacturing, . . . . .	184 39
Socks and smallwares, . . . . .	1,369 15
Sundries, . . . . .	80
Freight, . . . . .	83 36
Industries equipment, . . . . .	661 82

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19,263 28

Furnishings and household supplies: —

Beds, bedding, etc., . . . . .	\$16,047 71
Carpets, rugs, etc., . . . . .	1,363 71

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*Amounts carried forward,* . . . . \$17,411 42 \$351,047 40

<i>Amounts brought forward,</i>	\$17,411 42	\$351,047 40
<b>Furnishings and household supplies — <i>Con.</i></b>		
Crockery, glassware, cutlery, etc.,	2,490 37	
Dry goods and smallwares,	5,138 21	
Electric lamps,	917 81	
Fire hose and extinguishers,	245 49	
Furniture, upholstery, etc.,	2,119 41	
Kitchen and household wares,	6,327 93	
Laundry supplies and materials,	5,164 07	
Lavatory supplies and disinfectants,	1,326 97	
Machinery for manufacturing,	75 73	
Table linen, paper napkins, towels, etc.,	1,557 88	
Sundries,	68 00	
Freight,	293 96	
Industrial equipment,	1,889 66	
		45,026 91
<b>Medical and general care: —</b>		
Books, periodicals, etc.,	\$243 25	
Entertainments, games, etc.,	1,096 04	
Funeral expenses,	1,203 50	
Gratuities,	1 35	
Ice and refrigeration,	280 14	
Laboratory supplies and apparatus,	255 59	
Medicines (supplies and apparatus),	2,391 67	
Medical attendance (extra),	1,028 29	
Patients boarded out,	3,261 92	
Return of runaways,	386 19	
Tobacco, pipes, matches,	1,869 94	
Water,	1,812 85	
Sundries,	45 60	
Freight,	80 37	
		13,956 70
<b>Heat, light and power: —</b>		
Coal,	\$53,492 58	
Freight on coal and other expenses,	19,790 80	
Gas,	62 39	
Oil,	511 41	
Operating supplies for boilers and engines,	795 21	
Sundries,	5 00	
Freight,	14 00	
		74,671 39
<b>Farm and stable: —</b>		
Bedding materials,	\$624 94	
Blacksmithing and supplies,	362 68	
Carriages, wagons and repairs,	215 27	
Dairy equipment and supplies,	98 85	
Fertilizers,	312 73	
Grain, etc.,	10,586 41	
Hay,	4,727 41	
Harnesses and repairs,	378 23	
Horses,	1,485 00	
Cows,	65 00	
Other live stock,	176 92	
Rent,	75 00	
<i>Amounts carried forward,</i>	\$19,108 44	\$484,702 40

<i>Amounts brought forward,</i>	\$19,108 44	\$484,702 40
<b>Farm and stable — <i>Con.</i></b>		
Road work and materials,	152 71	
Spraying materials,	52 25	
Stable and barn supplies,	245 41	
Tools, implements, machines, etc.,	1,031 27	
Trees, vines, seeds, etc.,	606 83	
Veterinary services, supplies, etc.,	134 50	
Freight,	235 77	
	<hr/>	21,567 18
<b>Grounds: —</b>		
Fertilizers,	\$31 65	
Road work and materials,	64 05	
Tools, implements, machines, etc.,	139 59	
Trees, vines, shrubs, seeds, etc.,	164 00	
Freight,	30	
	<hr/>	399 59
<b>Repairs, ordinary: —</b>		
Cement, lime, crushed stone, etc.,	\$1,385 15	
Electrical work and supplies,	1,330 55	
Hardware, iron, steel, etc.,	2,041 57	
Lumber, etc. (including finished products),	2,014 91	
Paint, oil, glass, etc.,	2,378 37	
Plumbing and supplies,	2,518 34	
Roofing and materials,	259 02	
Steam fittings and supplies,	2,896 08	
Tools, machines, etc.,	413 05	
Boilers, repairs,	637 38	
Engines, repairs,	157 62	
Freight,	243 74	
	<hr/>	16,275 78
<b>Repairs and renewals: —</b>		
Autopsy room,	\$346 57	
Insulating and refrigeration,	458 33	
Operating-room equipment,	291 55	
Tearing down chimney,	200 00	
Window guards,	647 00	
	<hr/>	1,943 45
Total expenses for maintenance,		\$524,888 40

## SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1916,	\$2,564 31
Expended during the year (see statement annexed),	\$1,424 14
Reverting to treasury of Commonwealth,	30
	<hr/>
	1,424 44
Balance Nov. 30, 1917,	<hr/>
	\$1,139 87

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$17,507 93	
November cash vouchers (paid from advance money), on account of maintenance, . . . . .	22,492 07	
Due from treasury of Commonwealth from available appropriation account November, 1917, schedule, . . . . .	7,370 73	
	<hr/>	\$47,370 73

*Liabilities.*

Schedule of November bills, . . . . .	\$47,370 73
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## PER CAPITA.

During the year the average number of inmates has been 1,871.05.

Total cost for maintenance, \$524,888.40.

Equal to a weekly per capita cost of \$5.3948.

Receipt from sales, \$1,343.68.

Equal to a weekly per capita of \$0.0138.

All other institution receipts, \$13,308.29.

Equal to a weekly per capita of \$0.1367.

## INDUSTRIES FUND.

Balance Dec. 1, 1916, . . . . .	\$235 63	
Receipts credited, . . . . .	244 86	
	<hr/>	\$480 49
Expenditures, approved schedules (see statement annexed), . . . . .	\$28 79	
Balance Nov. 30, 1917, . . . . .	451 70	
	<hr/>	\$480 49

*Expenditures.*

Materials: —

Rent of booth at fair, . . . . .	\$20 00	
Electric work at fair, . . . . .	3 60	
Expenses to and from fair, . . . . .	5 19	
	<hr/>	\$28 79

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Grafton Colony construction, . . . . .	1912, chap. 679; 1914, chap. 30, . . . . .	\$410,000 00	\$808 17	\$409,999 70	\$0 30 <sup>1</sup>
Repairing old house at colony No. 2, . . . . .	1913, chap. 133, . . . . .	3,300 00	569 97	2,279 17	1,120 83
Female nurses' home, . . . . .	1913, chap. 133, . . . . .	36,300 00	46 00	36,280 96	19 04
		\$449,600 00	\$1,424 14	\$448,559 83	\$1,139 87

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

HIRAM L. HORSMAN,  
*Acting Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO D. COOK.



## INMATES' FUND.

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Cash on hand Dec. 1, 1916, . . . . .		\$6,653 60
Received from inmates, . . . . .	\$1,687 60	
Interest, Worcester Bank and Trust Company, . . . . .	61 36	
Interest, Mechanics Savings Bank, . . . . .	114 94	
		1,863 90
		\$8,517 50
Cash refunded, . . . . .	\$1,297 53	
Paid to Massachusetts Commission on Mental Diseases, . . . . .	1,490 93	
		2,788 46
Balance Nov. 30, 1917 (Worcester Bank and Trust Company, \$2,629.42; Mechanics Savings Bank, \$2,960.76; drawer, \$138.86), . . . . .		\$5,729 04

## VALUATION.

Nov. 30, 1917.

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REAL ESTATE.

Land (923 acres), . . . . .	\$258,133 58
Buildings, . . . . .	1,660,059 50

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\$1,918,193 08

## PERSONAL PROPERTY.

Travel, etc., . . . . .	\$6,493 96
Food, . . . . .	15,614 16
Clothing, . . . . .	19,445 87
Furnishings, . . . . .	69,835 60
Heat, light and power, . . . . .	13,703 77
Repairs and improvements, . . . . .	33,096 08
Farm, stable and grounds, . . . . .	25,724 40
Medical and general care, . . . . .	4,715 88
Industries, . . . . .	9,034 04

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\$197,663 76

## SUMMARY.

Real estate, . . . . .	\$1,918,193 08
Personal property, . . . . .	197,663 76

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\$2,115,856 84



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# STATISTICAL TABLES

AS ADOPTED BY AMERICAN MEDICO-PSYCHOLOGICAL  
ASSOCIATION.

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PRESCRIBED BY MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

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TABLE 1. — *General Information.*

1. Date of opening as an institution for the insane: Oct. 23, 1877.	
2. Type of institution: State.	
3. Hospital plant:—	
Real estate, including buildings, . . . . .	\$1,879,233 58
Personal property, . . . . .	197,663 76
Total, . . . . .	\$2,076,897 34

Total acreage of hospital, 923.26.

Acreage under cultivation during year, 102.23.

4. Medical service:—	Men.	Women.	Total.
Superintendent, . . . . .	1	—	1
Assistant physicians, . . . . .	7	2	9
Medical internes, . . . . .	—	—	—
Clinical assistants, . . . . .	—	1	1
Total, . . . . .	8	3	11
5. Employees:—	Males.	Females.	Total.
Graduate nurses, . . . . .	—	20	20
Other nurses and attendants, . . . . .	73	69	142
Social workers, . . . . .	—	—	—
All other employees, . . . . .	125	93	218
Total, . . . . .	198	182	380
6. Percentage of patients employed during year, .	Men. 50.4	Women. 46.8	Total. 48.8

TABLE 2. — *Financial Statement.*

See treasurer's report for data requested under this table.

TABLE 3. — *Movement of Patient Population for the Year ending Sept. 30, 1917.*

	INSANE.		
	Males.	Females.	Totals.
1. Patients on books of institution Sept. 30, 1916, . . .	837	962	1,799
Admissions during year: —			
(a) First admissions, . . . . .	24	12	36
(b) Readmissions, . . . . .	30	13	43
Total admissions, . . . . .	54	25	79
(c) Transfers from other institutions for the insane, .	230	165	395
2. Total received during year, . . . . .	284	190	474
3. Total under treatment during year, . . . . .	1,121	1,152	2,273
Discharged from books during year: —			
(a) As recovered, . . . . .	2	—	2
(b) As improved, . . . . .	18	9	27
(c) As unimproved, . . . . .	16	8	24
(d) As not insane, . . . . .	7	12	19
(e) Transferred to other institutions for the insane, .	13	4	17
(f) Died during year, . . . . .	107	89	196
4. Total discharged from books during year, . . . . .	163	122	285
5. Patients remaining on books of institution Sept. 30, 1917,	958	1,030	1,988
<i>Supplementary Data.</i>			
6a. Average daily number of patients on books during year,	888.06	989.75	1,877.81
6b. Average daily number of patients actually in institution during year.	859.86	952.64	1,812.30
7a. Average daily number of patients in family care, . .	—	22.91	22.91
7b. Average daily number of patients on visit and escape, .	28.20	14.20	42.40
8. Number of voluntary patients admitted during year, .	5	2	7
9. Number of temporary-care cases admitted during year, .	—	—	—
10. Number of patients actually remaining in institution Sept. 30, 1917.	919	1,001	1,920
State, . . . . .	895	963	1,858
Reimbursing, . . . . .	20	34	54
Private, . . . . .	4	4	8
11. Number of patients in family care Sept. 30, 1917, . .	—	18	18
State, . . . . .	—	18	18
Private, . . . . .	—	—	—
12. Number of different persons within the year, . . . .	1,120	1,151	2,271
13. Number of different persons admitted from the community.	54	25	79
14. Number of different persons dismissed, exclusive of transfer.	150	119	269
15. Number of non-insane patients or inmates in institution at end of institution year.	—	—	—



TABLE 4. — *Nativity of First Admissions and of Parents of First Admissions.*

NATIVITY.	PATIENTS.			PARENTS OF MALE PATIENTS.			PARENTS OF FEMALE PATIENTS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
United States, . . . . .	20	10	30	9	7	16	2	1	3
Canada, . . . . .	-	1	1	2	3	5	1	1	2
England, . . . . .	-	1	1	-	1	1	1	1	2
Ireland, . . . . .	2	-	2	4	4	8	2	3	5
Russia, . . . . .	1	-	1	-	1	1	-	-	-
Scotland, . . . . .	-	-	-	2	1	3	-	-	-
Total foreign born, . . . . .	3	2	5	8	10	18	4	5	9
Unascertained, . . . . .	1	-	1	7	7	14	6	6	12
Grand total, . . . . .	24	12	36	24	24	48	12	12	24

TABLE 5. — *Citizenship of First Admissions.*

	Males.	Females.	Totals.
Citizens by birth, . . . . .	20	10	30
Citizens by naturalization, . . . . .	-	-	-
Aliens, . . . . .	-	-	-
Citizenship unascertained, . . . . .	4	2	6
Total, . . . . .	24	12	36

TABLE 6. — *Psychoses of First Admissions.*

PSYCHOSES.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, total, . . . . .	-	1	1	-	1	1
Simple deterioration, . . . . .	-	1	1	-	-	-
General paralysis, . . . . .	2	-	2	2	-	2
With other brain or nervous diseases, total, . . . . .	1	-	1	1	-	1
Tabes, . . . . .	1	-	1	-	-	-
Epileptic, total, . . . . .	7	6	13	7	6	13
Deterioration, . . . . .	7	6	13	-	-	-
Not insane, total, . . . . .	14	5	19	14	5	19
Epilepsy without psychosis, . . . . .	1	-	1	-	-	-
Mental deficiency without psychosis, . . . . .	13	5	18	-	-	-
Total, . . . . .	24	12	36	24	12	36



TABLE 8. — *Age of First Admissions classified with Reference to Principal Psychoses.*

PSYCHOSES.	TOTAL.			YEARS.																				
	Males.	Females.	Totals.	UNDER 15.			15-20.			20-25.			25-30.			30-35.			35-40.			40-45.		
				Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General paralysis, . . . . .	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	
With other brain or nervous dis- eases.	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
Epileptic, . . . . .	7	6	13	-	-	-	1	-	1	2	2	4	2	2	4	-	-	-	-	-	-	-	-	
Not insane, . . . . .	14	5	19	-	-	-	1	-	1	5	2	7	4	1	5	3	1	4	-	-	1	1	2	
Total, . . . . .	24	12	36	-	-	-	2	-	2	7	4	11	6	3	9	5	1	6	2	-	2	1	3	

TABLE 8. — Age of First Admissions classified with Reference to Principal Psychoses. — Concluded.

PSYCHOSES.	YEARS.											
	45-50.			50-55.			55-60.			60-65.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	1	—	1	—	1	1	—	—	—	—	—	—
General paralysis, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Other brain or nervous diseases, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Epileptic, . . . . .	1	—	1	1	2	3	—	—	—	—	—	—
Not insane, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Total, . . . . .	1	—	1	1	2	3	—	—	—	—	—	—

TABLE 9. — *Degree of Education of First Admissions classified with Reference to Psychoses.*

	TOTAL.			ILLITERATE.			READS AND WRITES.			COMMON SCHOOL.			HIGH SCHOOL.			COLLEGE.			UNASCERTAINED.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General paralysis, . . . . .	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
With other brain or nervous diseases, . . . . .	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epileptic, . . . . .	7	6	13	1	1	2	—	—	—	6	3	9	—	—	—	—	—	—	—	2	2
Not insane, . . . . .	14	5	19	11	3	14	1	1	2	2	1	3	—	—	—	—	—	—	—	—	—
Total, . . . . .	24	12	36	12	4	16	1	1	2	8	4	12	3	—	3	—	1	1	—	2	2



TABLE 10. — *Environment of First Admissions classified with Reference to Principal Psychoses.*

PSYCHOSES.	TOTAL.			URBAN.			RURAL.			UNASCERTAINED.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	-	1	1	-	-	-	-	1	1	-	-	-
General paralysis, . . . . .	2	-	2	2	-	2	-	-	-	-	-	-
With other brain or nervous diseases, .	1	-	1	1	-	1	-	-	-	-	-	-
Epileptic, . . . . .	7	6	13	7	6	13	-	-	-	-	-	-
Not insane, . . . . .	14	5	19	10	3	13	3	2	5	1	-	1
Total, . . . . .	24	12	36	20	9	29	3	3	6	1	-	1

TABLE 11. — *Economic Condition of First Admissions classified with Reference to Principal Psychoses.*

PSYCHOSES.	TOTAL.			DEPENDENT.			MARGINAL.			COMFORTABLE.			UNASCERTAINED.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	-	1	1	-	-	-	-	-	-	-	1	1	-	-	-
General paralysis, . . . . .	2	-	2	-	-	-	1	-	1	-	-	-	1	-	1
With other brain or nervous diseases, . . . . .	1	-	1	-	-	-	-	-	-	1	-	1	-	-	-
Epileptic, . . . . .	7	6	13	1	1	2	1	1	2	4	4	8	1	-	1
Not insane, . . . . .	14	5	19	14	3	17	-	2	2	-	-	-	-	-	-
Total, . . . . .	24	12	36	15	4	19	2	3	5	5	5	10	2	-	2

TABLE 12. — *Use of Alcohol by First Admissions classified with Reference to Principal Psychoses.*

PSYCHOSES.	TOTAL.			ABSTINENT.			TEMPERATE.			INTERTEMPERATE.			UNASCERTAINED.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-
General paralysis, . . . . .	2	-	2	-	-	-	1	-	1	1	-	1	-	-	-
With other brain or nervous diseases, . . . . .	1	-	1	-	-	-	1	-	1	-	-	-	-	-	-
Epileptic, . . . . .	7	6	13	6	5	11	-	-	-	1	1	2	-	-	-
Not insane, . . . . .	14	5	19	14	5	19	-	-	-	-	-	-	-	-	-
Total, . . . . .	24	12	36	20	11	31	2	-	2	2	1	3	-	-	-



TABLE 14. — *Psychoses of Readmissions.*

PSYCHOSES.	Males.	Females.	Totals.	Males.	Females.	Totals.
With cerebral arteriosclerosis, . . . . .	.	.	.	1	-	1
General paralysis, . . . . .	.	.	.	12	4	16
With cerebral syphilis, . . . . .	.	.	.	1	-	1
With other brain or nervous diseases, total, . . . . .	.	.	.	1	-	1
Tabes, . . . . .	1	-	1			
Alcoholic, total, . . . . .	.	.	.	2	-	2
Acute hallucinosis, . . . . .	1	-	1			
Chronic hallucinosis, . . . . .	1	-	1			
With other somatic diseases, total, . . . . .	.	.	.	1	-	1
Delirium of unknown origin, . . . . .	1	-	1			
With constitutional psychopathic inferiority, . . . . .	.	.	.	1	-	1
Epileptic, total, . . . . .	.	.	.	9	9	18
Deterioration, . . . . .	8	8	16			
Clouded state, . . . . .	1	1	2			
Undiagnosed, . . . . .	.	.	.	1	-	1
Not insane, total, . . . . .	.	.	.	1	-	1
Epilepsy without psychosis, . . . . .	1	-	1			
Total, . . . . .	.	.	.	30	13	43

TABLE 15. — Discharges of Patients classified with Reference to Principal Psychoses and Condition of Discharge.

Psychoses.	TOTAL.			RECOVERED.			IMPROVED.			UNIMPROVED.			NOT INSANE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Senile, . . . . .	-	1	1	-	-	-	-	-	-	-	1	1	-	-	-
With cerebral arteriosclerosis, . . . . .	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-
General paralysis, . . . . .	4	-	4	-	-	-	2	-	2	2	-	2	-	-	-
With cerebral syphilis, . . . . .	2	1	3	-	-	-	2	1	3	-	-	-	-	-	-
Alcoholic, . . . . .	8	1	9	2	-	2	5	-	5	1	1	2	-	-	-
Manic-depressive, . . . . .	-	3	3	-	-	-	-	3	3	-	-	-	-	-	-
Dementia praecox, . . . . .	13	3	16	-	-	-	5	1	6	8	2	10	-	-	-
With constitutional psychopathic inferiority, . . . . .	1	-	1	-	-	-	-	-	-	1	-	1	-	-	-
Epileptic, . . . . .	6	5	11	-	-	-	2	2	4	4	3	7	-	-	-
Undiagnosed, . . . . .	1	1	2	-	-	-	1	1	2	-	-	-	-	-	-
Not insane, . . . . .	7	14	21	-	-	-	-	1	1	-	-	-	-	-	-
Total, . . . . .	43	29	72	2	-	2	18	9	27	16	8	24	7	12	19











[illegible]







TABLE 18. — *Total Duration of Hospital Life of Patients Dying in Hospital classified According to Psychoses.*

PSYCHOSES.	TOTAL.			MONTHS.									YEARS.											
				LESS THAN 1.			1-3.			4-7.			8-12.			1-2.		3-4.		5-10.				
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.			
Traumatic, . . . . .	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Senile, . . . . .	4	8	12	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
With cerebral arteriosclerosis, . . . . .	2	4	6	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
General paralysis, . . . . .	14	4	18	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
With other brain or nervous diseases, . . . . .	1	7	8	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Alcoholic, . . . . .	7	1	8	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Due to drugs and other exogenous toxins, . . . . .	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
With other somatic diseases, . . . . .	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Manic-depressive, . . . . .	2	8	10	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Dementia praecox, . . . . .	29	32	61	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Paranoia and paranoid conditions, . . . . .	1	4	5	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
With mental deficiency, . . . . .	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
With constitutional psychopathic inferiority, . . . . .	40	16	56	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Epileptic, . . . . .	8	8	16	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Not insane, . . . . .	4	8	12	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2			
Total, . . . . .	107	89	196	2	1	3	2	1	3	2	2	4	6	3	9	9	4	13	18	19	37	19	14	33



TABLE 19. — *Family Care Department.*

	Males.	Females.	Totals.
Remaining Sept. 30, 1916, . . . . .	-	29	29
Admitted within the year, . . . . .	1	14	15
From institution, . . . . .	-	12	12
From escape, nominally, . . . . .	-	2	2
From visit, nominally, . . . . .	1	-	1
Whole number of cases within the year, . . . . .	1	43	44
Dismissed within the year, . . . . .	1	25	26
Returned to institution, . . . . .	-	21	21
Died, . . . . .	-	2	2
Discharged, . . . . .	1	2	3
Escaped, . . . . .	-	-	-
On visit, . . . . .	-	-	-
Remaining Sept. 30, 1917, . . . . .	-	18	18
Supported by State, . . . . .	-	18	18
Private, . . . . .	-	-	-
Self-supporting, . . . . .	-	-	-
Number of different persons within the year, . . . . .	-	36	36
Number of different persons admitted, . . . . .	-	11	11
Number of different persons dismissed, . . . . .	-	20	20
Daily average number, . . . . .	-	22.91	22.91
State, . . . . .	-	22.91	22.91
Private, . . . . .	-	-	-
Self-supporting, . . . . .	-	-	-

















